

A novel DCL2-dependent miRNA pathway in tomato affects susceptibility to RNA viruses

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Abstract

Tomato Dicer-like2 (*sIDCL2*) is a key component of resistance pathways against potato virus X (PVX) and tobacco mosaic virus (TMV). It is also required for production of endogenous small RNAs including miR6026 and other non-canonical miRNAs. The *sIDCL2* mRNAs are targets of these *sIDCL2*-dependent RNAs in a feedback loop that was disrupted by target mimic RNAs of miR6026. In lines expressing these RNAs there was, correspondingly, enhanced resistance against PVX and TMV. These findings illustrate a novel miRNA pathway in plants and a crop protection strategy in which miRNA target mimicry elevates expression of defense-related mRNAs.

Keywords

RNA silencing; tomato; Dicer; miRNA; virus

Introduction

RNA silencing plays important roles in plant development, genome stability, and anti-viral resistance (Baulcombe 2004). There are multiple pathways of RNA silencing in plants in which small (s)RNAs, ranging from 20-24-nt, bind to Argonaute (AGO) effector proteins. The AGO ribonucleoprotein then anneals to a target RNA through Watson-Crick base pairing with an outcome that depends on the nature of the target RNA. If the target RNA is cytoplasmic there is post-transcriptional gene silencing (PTGS) through cleavage of target RNA and/or translation inhibition (Rogers and Chen 2013) whereas, with nuclear RNA, there may be epigenetic effects in which AGOs recruit DNA/chromatin modifying factors (Law and Jacobsen 2011).

In plants, the cytoplasmic pathways of RNA silencing involve two different types of sRNA: small interfering (si)RNAs and microRNAs (miRNA). The siRNAs are produced from various types of double stranded RNA whereas miRNAs have a hairpin-like RNA precursor in which there are mismatches in the regions of base pairing. In both instances the processing enzyme is referred to as Dicer-Like (DCL).

The siRNA and miRNA pathways inter-connect through a complex mechanism involving secondary siRNA production (Allen et al. 2005; Zhai et al. 2011; Li et al. 2011). In the 'two-hit' model a transcript with dual miRNA target sites is the secondary siRNA precursor (Allen et al. 2005) whereas in the 'one-hit' model the miRNA, is typically 22-nt rather than the canonical 21-nt (Chen et al. 2010; Cuperus et al. 2010). In both models the miRNAs may mediate cleavage of their target RNA, as in the normal miRNA pathway, but there are several additional steps. First the 3' cleavage product of the target RNA is converted into a double-stranded (ds) form by an RNA-dependent RNA polymerase 6 (RDR6) RNA. The dsRNA is

then processed by DCL4 to secondary siRNAs (Allen et al. 2005; Gascioli et al. 2005).

A distinct feature of these secondary RNAs is that they align predominantly to their template RNA in a phased register in which the first position is opposite position 10 of the initiator miRNA. In some instances the phasing register has a 21-nt spacing (Allen et al. 2005; Zhai et al. 2011; Creasey et al. 2014) but, in male reproductive organs of monocots, there are also phased secondary sRNAs with a 24-nt register (Johnson et al. 2009).

There are two mechanisms for 22-nt sRNA production. One mechanism, for miRNAs, is based on DCL1 that typically produces 21-nt sRNAs but, if the precursor RNA has an asymmetric bulge in the base paired region, it generates 22-nt products. Presumably the bulge allows 22-nt RNA to be accommodated between the DCL active sites on either side of the mature miRNA. The second mechanism of 22-nt sRNA production involves DCL2 and it is independent of bulges in the precursor RNA. DCL2 in *Arabidopsis* can process endogenous and viral dsRNA into 22-nt sRNAs especially when other DCLs, especially DCL4, are absent (Gascioli et al. 2005; Xie et al. 2004; Bouché et al. 2006). More importantly, DCL2 plays a primary role in transgene silencing, especially in sense transgene induced silencing and in transitivity of hairpin-induced transgene silencing (Mlotshwa et al. 2008; Parent et al. 2015). There is also a role of DCL2 in systematic spreading of transitive silencing between cells and through the vascular system (Wu et al. 2017; Taochy et al. 2017).

In addition to involvement in transgene and viral RNA silencing there could be secondary sRNA cascades affecting endogenous gene expression and anti-virus defense that are also dependent on DCL2 and endogenous 22-nt sRNAs. To investigate this possibility we analyzed DCL2 isoforms in tomato and find that *sIDCL2a* and *sIDCL2b* are the most

abundantly expressed genes in the four member *sIDCL2* family. From *sldcl2ab* mutants we conclude that DCL2 is the major Dicer in tomato defense against TMV and PVX and that it is involved in the biogenesis of endogenous 22-nt sRNA. The 24-nt sRNA pathways are also influenced by DCL2, both positively and negatively. Amongst the endogenous 22-nt-sRNAs there are miRNAs including miR6026 that targets *sIDCL2* mRNA and triggers secondary sRNA production. We disrupted this regulatory feedback loop with target mimic RNAs of miR6026 so that *sIDCL2* was upregulated and anti-virus resistance was enhanced. We propose that disruption of this and other defense-related miRNAs could be used as part of integrated pest management strategy to protect crops against viruses and other pathogens.

Results and Discussion

CRISPR mutants of *sIDCL2*

The tomato genome encodes four isoforms of *sIDCL2* (Bai et al. 2012) of which two (*sIDCL2a* and *sIDCL2b*) are highly expressed in young leaves and two (*sIDCL2c* and *sIDCL2d*) are barely detectable by RT-PCR (Supplemental Fig. S1). To investigate the functions of *sIDCL2* we designed a pair of CRISPR small guide RNAs (sgRNAs) to target the RNase III domain closest to the C terminus of *sIDCL2a* and *sIDCL2b* (Supplemental Fig. S2A) and we transformed them into tomato as part of an integrated construct with Cas9. Of the several T0 plants with edited *sIDCL2a* or *sIDCL2b*, we selected two for further analysis. Both plants carried the same deletion of two codons and an isoleucine to valine substitution in the *sIDCL2a* RNase domain but they had different premature stop codons in *sIDCL2b* (Supplemental Fig. S2B, C). These alleles (*sldcl2a-1*, *sldcl2b-1* and *sldcl2b-2*) have mutations in a highly conserved region of DCL2 (Supplemental Fig. S2D) and it is likely that they would encode non-functional proteins.

The selfed progeny of these T0 plants in which the CRISPR/Cas9 transgene was lost by segregation are *slDCL2a-1 slDCL2b-1*, *slDCL2a-1 slDCL2b-2*, *slDCL2a-1*, *slDCL2b-1*, or *slDCL2b-2*, depending on whether they carried one or both of the mutations in the homozygous condition (Supplemental Table S1). Transcript levels of *slDCL2a* and *slDCL2b* were similar or slightly higher in *slDCL2a-1 slDCL2b-1/slDCL2a-1 slDCL2b-2* (hereafter referred as *dcl2ab*) than in M82 wild type (hereafter referred as WT) (Supplemental Fig. S3) indicating that the mutations do not cause transcript degradation through mRNA decay. There was similarly no effect on other *DCL* mRNAs (Supplemental Fig. S3) and it is unlikely, therefore, that the loss of DCL2 results in compensating changes in other DCLs.

***slDCL2a/slDCL2b* affects endogenous 22-nt and 24-nt sRNA accumulation**

Although DCL2 plays crucial roles in sense transgene-induced silencing and transitivity of hairpin-induced transgene silencing (Mlotshwa et al. 2008), it may also backup DCL4 in the production of sRNAs from viral and endogenous RNAs (Gascioli et al. 2005; Wu et al. 2017; Bouché et al. 2006). Until now, however, there has been no analysis of sRNA from endogenous loci dependent on DCL2 in the presence of DCL4 that could be informative about a DCL4-independent role.

To investigate this possibility, we sequenced sRNA in WT and *dcl2ab* tomato leaves and found the predominant size class of sRNA was 24-nt with small amounts of 21-nt species (Fig. 1A) in both genotypes. The lack of a severe development phenotype (Supplemental Fig. S4) in *dcl2ab* indicates that the mutations did not lead to loss of essential sRNA species. Of the 642,444 sRNAs there were 2,432 (0.4%) with differential accumulation between WT and *dcl2ab* of which 1,779 were less abundant in *dcl2ab* (*slDCL2*-dependent sRNA-D2 sRNA) and 653 were more abundant (*slDCL2*-inhibited sRNA-D2i sRNA) (Fig. 1B; Supplemental

Tables S2 and S3). The D2 sRNAs were predominantly 22-nt (Fig. 1C) consistent with the role of DCL2 in 22-nt sRNA biogenesis as is likely in *Arabidopsis* (Gascioli et al. 2005; Bouché et al. 2006). In addition, there was a minor 24-nt peak (Fig. 1C) in both D2 and D2i sRNA that implies positive and negative roles of DCL2 in 24-nt sRNA pathways.

The 22-nt D2 sRNAs were predominantly from transposable elements (TEs) (Fig. 1D), indicating that sIDCL2a/sIDCL2b plays a role in genome stability. The D2 and D2i 24-nt sRNA, in contrast, were mostly from inter-genic regions (Fig. 1D). There was also a difference in the chromosomal distribution of these differentially expressed (DE) sRNA. The genomic loci producing 22-nt D2 sRNA revealed by SegmentSeq (Hardcastle et al. 2012) were distributed evenly across chromosomes whereas those with 24-nt DE sRNAs were in the distal regions (Fig. 1E; Supplemental Fig. S5) that, in the tomato genome, correspond to euchromatin (Tomato Genome Consortium 2012).

Our interpretation of these findings is that sIDCL2a/sIDCL2b produces 22-nt D2 sRNA directly by cleavage of precursor RNAs. The 24-nt D2 sRNAs are likely to be secondary sRNAs that may be dependent on a 22-nt D2 sRNA, as in monocots (Johnson et al. 2009). The D2 loci, according to this idea, with predominantly 22-nt sRNAs (Supplemental Fig. S6) would be largely made up of primary sRNAs generated by DCL2. The D2 loci with predominantly 24-nt sRNA (Supplemental Fig. S6) would be largely secondary sRNA loci. Consistent with the role of DCL2 in release of 22-nt D2 sRNAs the precursors of four D2 sRNA loci accumulated at higher levels in *dcl2ab* than in WT (Supplemental Fig. S7).

The D2i sRNAs of all size classes are likely to be derived from precursor RNAs that are normally processed by sIDCL2 but, in the *dcl2ab* plants, are available for other DCL proteins

(Nagano et al. 2014). Consistent with this proposal the 24-nt D2i sRNA regions produced sRNA that was predominantly 22-nt in WT plants (Supplemental Fig. S8). The precursors of two D2i loci were similarly abundant in WT and *dcl2ab* (Supplemental Fig. S7) consistent with processing by DCL2 in WT into 22-nt sRNA and a substitute DCL producing 24-nt sRNA in *dcl2ab*.

sIDCL2a/sIDCL2b-dependent 22-nt miRNAs

To find out whether the D2 22-nt sRNAs included miRNAs we compared the abundance of tomato miRNA reads in the sRNA-seq datasets of WT and *dcl2ab*. All of the 21-nt miRNAs and most of 22-nt miRNAs did not show statistically significant differences ($p < 0.01$) (Fig. 2A). The main exception, however, was the 22-nt miRNA: miR6026 (Fig. 2A, B). Consistent with the sRNA-seq data, the level of miR6026 detected by Northern blotting of RNA from 24-day-old leaves was lower than WT in *dcl2b* and much lower in *dcl2ab* (Fig. 2C). By comparison, the 22-nt miR482e was at the same level in WT and mutant genotypes (Fig. 2C). In contrast, most of miRNAs including miR482e were downregulated in the sIDCL1 knock down line (Kravchik et al. 2014) compared to control, whereas miR6026 was not affected by sIDCL1 knock down (Supplemental Fig. S9). We conclude, therefore, that miR6026 is unusual amongst miRNAs in that it is sIDCL2-dependent.

The most straightforward interpretation of these data is that the *MIR6026* precursor is cleaved by DCL2 to release miR6026. Other possibilities are that other DCL proteins carry out the cleavage and that DCL2 merely stabilizes the processed miR6026 or its precursor. The former possibility is unlikely because DCL2 has no role in stabilizing other 22-nt miRNAs and the latter can be ruled out because there are 21-nt sRNAs from the stem loop in the *MIR6026* precursor RNA that are unaffected by *dcl2ab* (Supplemental Fig. S10). An effect

on the precursor is also ruled out because there are similar levels of pre-miR6026 in WT and *dcl2ab* (Supplemental Fig. S7).

The 22-nt miRNAs in *Arabidopsis* trigger secondary sRNA production using their RNA targets as a template (Chen et al. 2010; Cuperus et al. 2010) and, correspondingly, in tomato, there were sRNAs corresponding to the miR6026 potential target mRNAs (Fig. 2D; Supplemental Table S4) that include the mRNAs for *sIDCL2a*, *sIDCL2b*, *sIDCL2d* and a disease resistance gene - *sITM2* (Kravchik et al. 2014; Li et al. 2011; Wu et al. 2016) (Fig. 3; Supplemental Fig. S11). These sRNAs were predominantly 21-nt in length and they aligned with the 3' side of the miRNA target site (Fig. 3; Supplemental Fig. S11). The sRNAs from *sIDCL2a/b/d*, like many secondary sRNAs, were predominantly in a phased register corresponding to the miRNA-directed cleavage site. This phasing pattern was most pronounced in the regions adjacent to the miRNA target (Fig. 3; Supplemental Fig. S11). The phasing of the *sIDCL2* sRNAs is less pronounced than with the tasiRNA loci in *Arabidopsis*. To explain this difference we propose that the 22-nt secondary sRNAs (Supplemental Table S5) from the *sIDCL2* mRNAs could act *in cis* and trigger additional rounds of secondary sRNA in various phasing registers.

The sRNAs of *sIDCL2a*, *sIDCL2b* and *sIDCL2d* are dependent on sIRDR6 and partially on sIDCL4 (Supplemental Fig. S12) and their biogenesis, therefore, is like that of the well-known phasi/tasiRNA and easiRNA biogenesis in *Arabidopsis* (Allen et al. 2005; Zhai et al. 2011; Creasey et al. 2014). A crucial difference, however, is that the miR6026 is DCL2-dependent and there is, therefore, a feedback component to the system. The triggers of *Arabidopsis* phasi/tasiRNA and easiRNAs are 22-nt, similarly to miR6026, but they are dependent on DCL1 rather than DCL2 (Cuperus et al. 2010).

Our characterization of miR6026 provides the first example of non-DCL1 processed miRNA in plants with a validated target RNA (Supplemental Fig. S9). There are other 22-nt miRNAs but they are dependent on DCL1 (Cuperus et al. 2010) and their size is determined by an asymmetric bulge in the miRNA/miRNA* (Supplemental Fig. S13). The 22-nt miR6026 has a precursor that is symmetrical in the miRNA/miRNA* region and its size is likely to be influenced by the DCL2 protein, as for the 22-nt D2 sRNAs, rather than by the structure of the miRNA precursor.

Of the tomato 22-nt miRNAs there are three others, in addition to miR6026, that have symmetric structures in the miRNA/miRNA* duplex: miR5302b-5p, miR10533 and miR828. The former two are reduced in the *dcl2ab* samples (Fig. 2A) but not as much as miR6026. We predicted potential target genes of miR5302b-5p and miR10533 (Supplemental Table S6) however none of them produced sRNA in WT according to the sRNA-seq data (data not shown). The miR828 is expressed only at low abundance so that differential expression in the *dcl2ab* mutant cannot be assessed (data not shown) but the phased secondary sRNAs from its *TAS4* target locus (Singh et al. 2016) were less abundant in the *dcl2ab* mutant (Supplemental Fig. S14). It is likely, therefore, that both of these other 22-nt miRNAs with symmetrical precursors are DCL2-dependent, like miR6026, although it is not clear whether miR5302 or miR10533 triggers secondary siRNA.

The biological function of sDCL2-dependent miR6026

To explore the biological function of miR6026 we transgenically expressed a non coding RNA with two tandem repeats of a miR6026 target mimic site. These RNAs were designed, like the endogenous target mimic RNAs of miR399 (Puga et al. 2007), to have a three

nucleotide bulge at positions 10 and 11 of the miRNA binding site (Fig. 4A). We predicted that this RNA would lock the miR6026 into a nonproductive interaction that would compete with the normal binding to *sIDCL2a*, *sIDCL2b*, *sIDCL2d* and *sITM2* mRNAs.

Transgenic tomato lines with high (L2, L6) or low expression levels (L7) of the target mimic RNA grew normally under growth chamber conditions (Fig. 4B, C) and set fruit and seed as well as WT plants. There was a negative correlation between miR6026 accumulation and the target mimic RNA in these plants (Fig. 4B) indicating that the target mimic RNA reduces the cognate miRNA abundance, as in other examples (Yan et al. 2012). This target mimic RNA effect was highly specific so that the only affected miRNA in the L6 lines was miR6026 (p-value cutoff, $p < 0.05$) (Supplemental Fig. S15). Correspondingly there was upregulation of *sIDCL2a* and, to a lesser extent, *sIDCL2b* that correlated with the levels of the target mimic RNA (Fig. 4D).

An sRNA-seq analysis of two independent T1 plants from L6 and L7 confirmed that the level of miR6026 was lower in L6 than L7 (Supplemental Fig. S15) and that there was a parallel effect on secondary sRNA from *sIDCL2a*, *sIDCL2b* and *sIDCL2d* (Fig. 4E). In contrast the *sITM2* sRNA and mRNA were not affected (Fig. 4E; Supplemental Fig. S16). To further validate miR6026-directed target cleavage, we assayed for miR6026 cleavage sites of *sIDCL2a*, *sIDCL2b* and *sIDCL2d* mRNAs with 5'-RLM-RACE. In each instance the predicted cleaved products for miR6026 were amplified in WT rather than *dcl2ab* or target mimic lines (Supplemental Fig. S16).

These findings confirm that miR6026 targets mRNAs of *sIDCL2a*, *sIDCL2b* and *sIDCL2d* *in vivo* and that it is responsible for the *sIDCL2* secondary sRNA production. These findings

also explain the higher mRNA levels of *slDCL2a* and *slDCL2b* in *dcl2ab* than in WT (Supplemental Fig. S3B). The lack of an effect on *slTM2* sRNA is likely because other miRNAs target the *slTM2* mRNA and could trigger secondary siRNA in the absence of miR6026 (Li et al. 2011) (Supplemental Fig. S11F; Supplemental Fig. S17).

The increased abundance of *slDCL2a* and *slDCL2b* RNA in L6 (strong mimic line) relative to WT lines (Fig. 4D) should influence the levels of endogenous D2 and D2i sRNAs (Fig. 1) and exogenous viral sRNAs (Xie et al. 2004; Bouché et al. 2006). Consistent with these predictions there was a trend for the endogenous D2 sRNAs to increase more in L6 than in L7 and for the D2i sRNAs to be less abundant (Supplemental Fig. S18). The effect on D2 sRNAs was clearest with the 22-nt species and with the 24-nt D2i sRNAs (Supplemental Fig. S18).

The potential involvement of DCL2 in viral sRNA production was supported by the increase in *slDCL2b* mRNA in TMV- and PVX-infected tomato (Fig. 5A) and by the enhanced viral symptoms in *dcl2ab* relative to WT (Fig. 5B, C). The TMV-infected mutant plants had ‘wiry’ (Lesley 1928) or shoestring-like leaves whereas infected WT plants have chlorosis without leaf distortion (Fig. 5B; Supplemental Fig. S19). PVX-infected *dcl2ab* plants were dead two weeks after inoculation in contrast to the WT plants that survived although with growth stunting and leaf distortion (Fig. 5B). Consistent with the upregulation of *slDCL2b* upon virus infection (Fig. 5A), the TMV-infected *dcl2b* had ‘wiry’ leaves as with infected *dcl2ab* (Supplemental Fig. S20). However, at 34 days after infection, the TMV symptoms were milder on *dcl2b* than on *dcl2ab* (Supplemental Fig. S20), consistent with a role of *slDCL2a* in the late stages of anti-viral defense.

The anti-viral activity of DCL2 was confirmed by the sRNA profiles of TMV-infected WT and *dcl2ab*. In *dcl2ab* the 22-nt viral sRNAs were less abundant than in WT (Supplemental Fig. S21) whereas 21-nt viral sRNAs were increased (Supplemental Fig. S21), due possibly to compensating activity of DCL4.

Also consistent with an antiviral role of DCL2 the 22-nt sRNAs in TMV-infected L6 were more abundant than in WT plants (Supplemental Fig. S21). In addition there were fainter chlorotic symptoms than in WT (Fig. 5B; Supplemental Fig. S19) and viral RNA accumulation was reduced (Fig. 5D). There was also less viral RNA accumulation in PVX-infected mimic plants than in WT (Fig. 5E), although the viral symptoms were similar (Fig. 5C).

The reduction of symptoms or virus infection in the TMV-infected plants is likely due to DCL2/miR6026 because the TMV symptoms in progeny of L6 \times *dcl2b* or *dcl2ab* were as severe as in the *dcl2b* and *dcl2ab* (Supplemental Fig. S22). From these results we conclude that the DCL2-miR6026 feedback influences the effect of RNA silencing on viral RNA accumulation and viral disease progression in tomato (Supplemental Fig. S23).

This analysis of sIDCL2 has both applied and basic science implications. At the applied level we have demonstrated that disease resistance can be enhanced by blocking a miRNA that targets a defense mRNA (Fig. 5). In our L6 lines this effect was achieved without inhibition of basic features in growth and development (Fig. 4C) although a more detailed phenotypic analysis remains to be carried out. The potential of this approach is also confirmed by findings of enhanced resistance to soybean mosaic virus (SMV) (Bao et al. 2018) and *Phytophthora infestans* (Jiang et al. 2018) in other lines in which defense mRNAs were

elevated by miRNA target site mimics. There are multiple miRNAs including miR403 (Harvey et al. 2011) and the miR482 family (Shivaprasad et al. 2012) that, like miR6026, target defense proteins. Although the effect of any single defense miRNA mimic may be weak (Fig. 5) it could be that strong resistance can be achieved by combining several of these RNAs in a single line.

The fundamental science advance of this work is through the finding that there are endogenous 22-nt sRNA products of DCL2 including the miRNAs (Fig. 1; Fig. 2). The finding of DCL2-dependent siRNAs had been suspected previously from the analysis of *DCL2* in *Arabidopsis* (Xie et al. 2004; Bouché et al. 2006) but not shown directly unless the plants also lacked DCL4. We also show that there are D2 sRNAs and D2i sRNAs that are predominantly 24-nt length (Fig. 1C-E). The DCL2 effect on 24-nt sRNAs is most likely indirect and it could influence the epigenome of tomato through the RNA-direct DNA methylation pathway (Nuthikattu et al. 2013). From these various findings it is clear that DCL2 is not merely a back up for DCL4 but an important component of the diverse RNA silencing pathways of plants.

Materials and methods

Plant materials

All tomato plants used in this study are *Solanum lycopersicum* cv M82. CRISPR/Cas9 mutants were obtained by stably transforming tomato plants as described previously (Gouil and Baulcombe 2016). For target mimicry plants, two tandem repeats of miR6026 target mimic were cloned into the gateway construct pGWB402 omega, and then transformed into tomato. Primers for cloning and genotyping were listed in Supplemental Table S7.

For virus infection, three-week-old plants of *Nicotiana benthamiana* were rub-inoculated with TMV U1 virion or infiltrated with agrobacteria carrying pGR106 for PVX (Harris et al. 2013). After one week, *N. benthamiana* leaves were harvested and grinded to sap which was rubbed onto 10-day-old tomato cotyledons for inoculation.

RNA analyses

Total RNA was extracted by the TRIzol method. Northern blotting and sRNA library preparation were performed as described (Shivaprasad et al. 2012). RT-PCR was performed as described (Harris et al. 2013). 5'-RLM-RACE was performed following the instruction of GeneRacer Kit (Life Technologies). Primers were listed in Supplemental Table S7.

Bioinformatics

The sRNA reads were trimmed using TrimGalore and mapped to the Heinz genome SL3.0 or respective genes using Bowtie (Langmead et al. 2009) with specified parameters of -m 1 and -v 0. The bam files were used for differential sRNA analysis by segmentSeq (Hardcastle et al. 2012) and DESeq2 (Love et al. 2014) after filtering out those sRNAs with less than five sequencing reads in five libraries. The raw sequencing data are available in the NCBI SRA database under accession No. SRP127908.

Phasing analysis of sRNA was performed by counting 21-nt sRNA mapped to each of 21 registers in each gene. Register 1-21 represents the distance of sRNA starting site from 5' of miR6026. Percentages of 21-nt reads corresponding to each of the 21 registers from each gene were shown by radar plots.

Analyses of miRNA were performed based on a tomato miRNA list (Supplemental Table S8)

combining 92 miRNAs from miRBase22 and 30 from recent publications.

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Figures

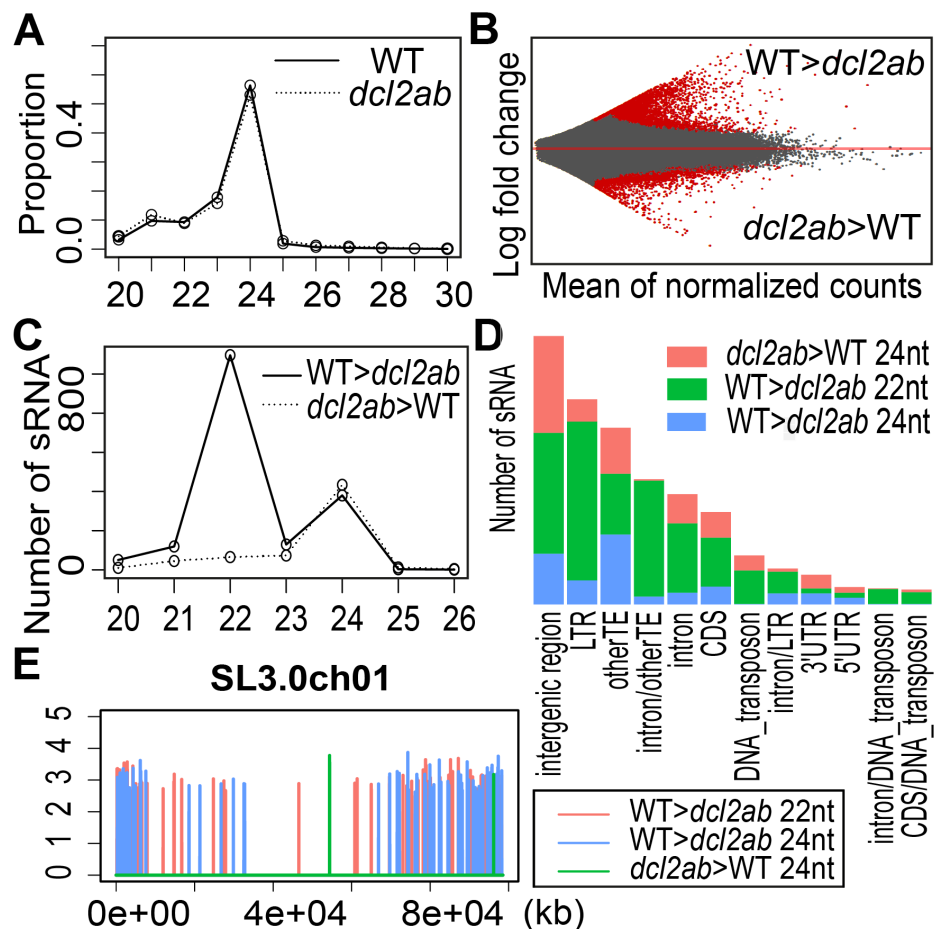


Figure 1. sDCL2a and sDCL2b are responsible for endogenous sRNA biogenesis. High-throughput sequencing data of sRNAs in 24-day-old leaves of WT and *dcl2ab* mapped to tomato genome SL3.0. **A.** sRNA size profile in WT and *dcl2ab*, respectively; **B.** MA plot showing differential analysis of sRNAs between WT and *dcl2ab*. sRNAs that are differentially expressed ($p\text{-adj} < 0.01$ calculated by DESeq2) are coloured in red; **C.** Length distribution of differentially expressed sRNA (DE sRNA); **D.** Genomic feature analysis of 22-nt D2 sRNA and 24-nt DE sRNA; Y-axis shows the number of DE sRNA in each category of genomic feature; **E.** Chromosomal distributions of 22-nt D2 loci and 24-nt DE loci. X-axis shows the chromosomal coordinates, and y-axis shows the log10 values of sRNA reads number in WT and *dcl2ab* for D2 and D2i loci, respectively.

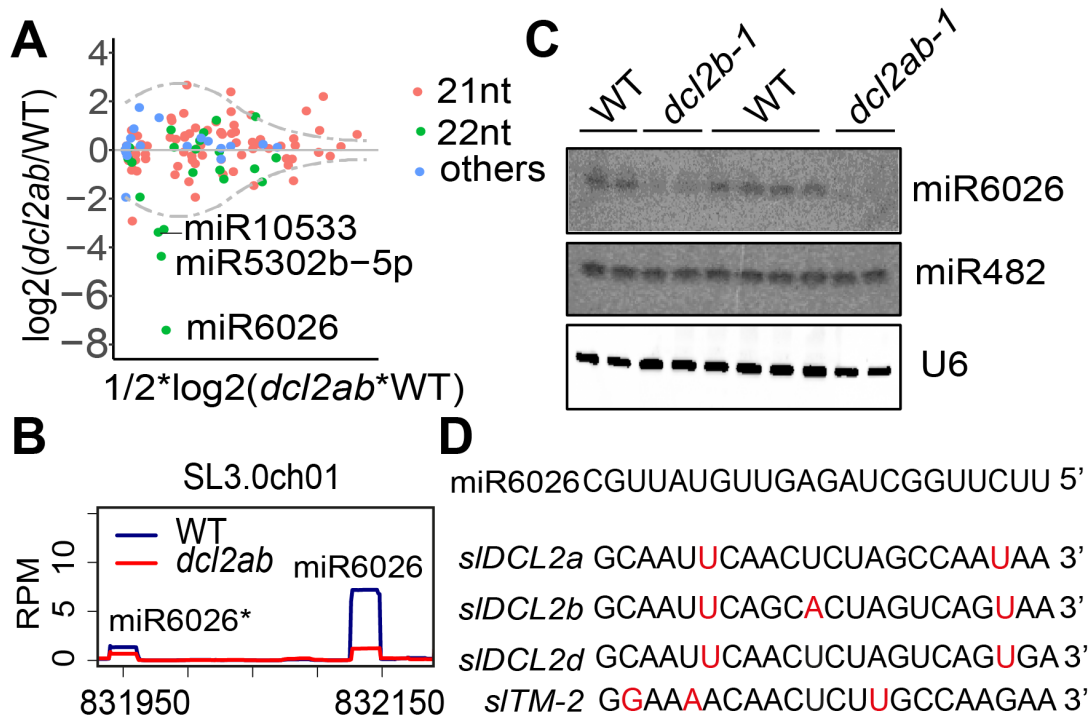


Figure 2. *sDCL2a* and *sDCL2b* are required for biogenesis of miR6026. **A.** MA Plot showing miRNA abundance in WT and *dcl2ab*. Different sizes of miRNAs are shown in different colours. miR6026, miR5302b-5p and miR10533 are marked; **B.** sRNA RPM plots showing reduced accumulations of miR6026 in *dcl2ab* as compared to WT. Mature miR6026 and miR6026* are marked; **C.** Northern blots of miR6026 and miR482e with total RNA extracted from 24-day-old leaves of WT, *dcl2ab*, and *dcl2ab* mutants, with U6 as loading control; **D.** Sequences of miR6026 and potential targets. Mismatches are shown in red.

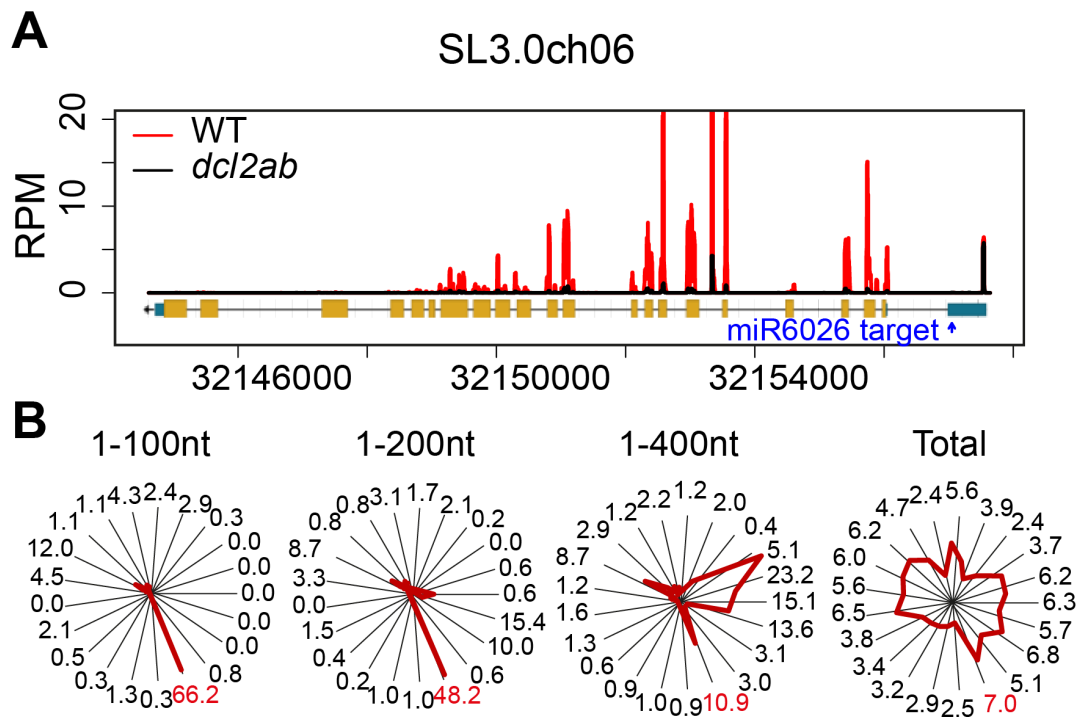


Figure 3. Accumulation of *sIDCL2a* sRNAs is reduced in *dcl2ab*. **A.** sRNA RPM plots showing the levels of *sIDCL2b* sRNAs in WT and *dcl2ab*. In the gene models, rectangles and lines represent exons and introns, respectively. UTRs and ORFs are in cyan and yellow, respectively. Arrows mark the direction of transcription. Target site of miR6026 is marked with blue arrowhead; **B.** The phasing of *sIDCL2a* sRNAs in WT. Radar plots show percentages of 21-nt reads corresponding to each of the 21 registers from the whole transcript of *sIDCL2a*, or 1-100nt, 1-200nt, 1-400nt of the *sIDCL2a* transcript (the distance from the miR6026 cleavage position) in WT sRNA-seq data. Percentage of register of the 10th position, the miR6026-guided cleavage site between the 10th and 11th nucleotide of miR6026 was marked in red.

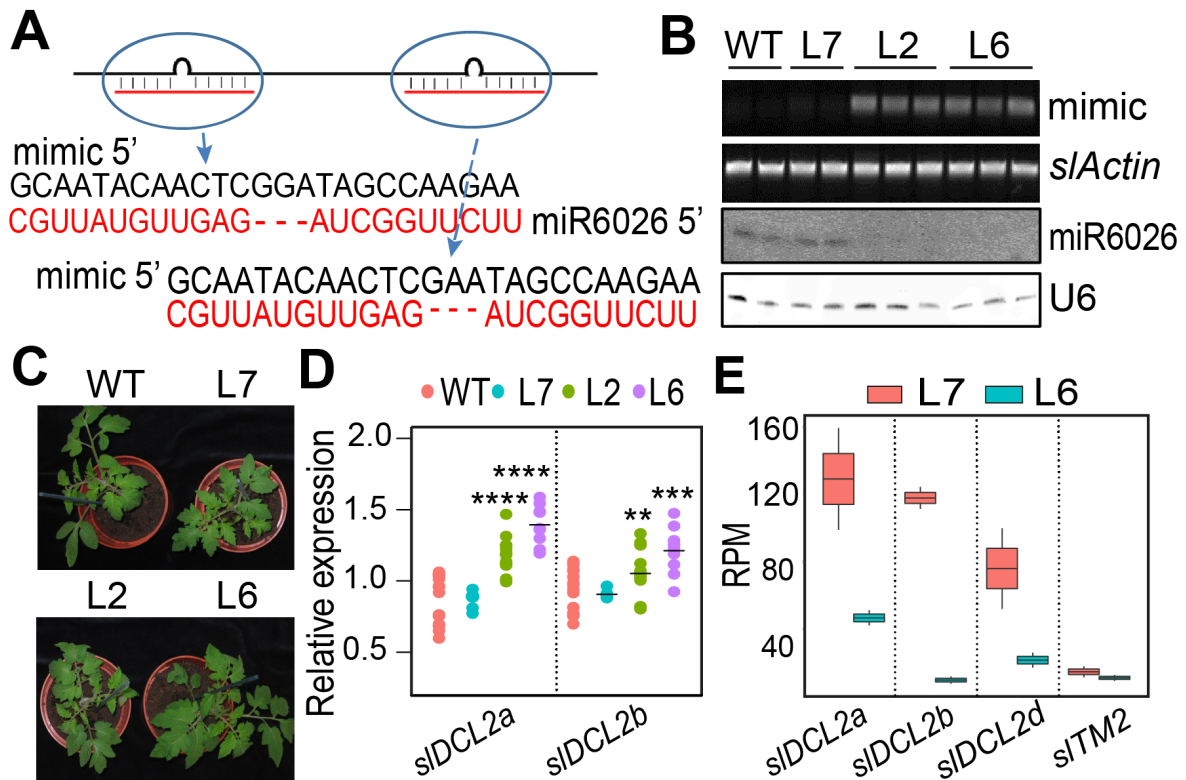


Figure 4. miR6026 targets *sIDCL2a/b/d* transcripts and triggers secondary sRNA production.

A. Diagram of miR6026 target mimic; **B.** (upper to lower) semi-quantitative RT-PCR of miR6026-mimic RNA in WT and different mimicry lines with *sActin7* as control; Northern Blots of miR6026 with U6 as loading control; **C.** 3-week old plants of WT, one weak mimic line (L7) and two strong mimic lines of miR6026 (L2 and L6); **D.** qRT-PCR of *sIDCL2a* and *sIDCL2b* in wild type and mimicry lines; ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$; **E.** RPM of total reads mapped to potential target transcripts of miR6026 in weak mimic line (L7) and strong mimic line (L6).

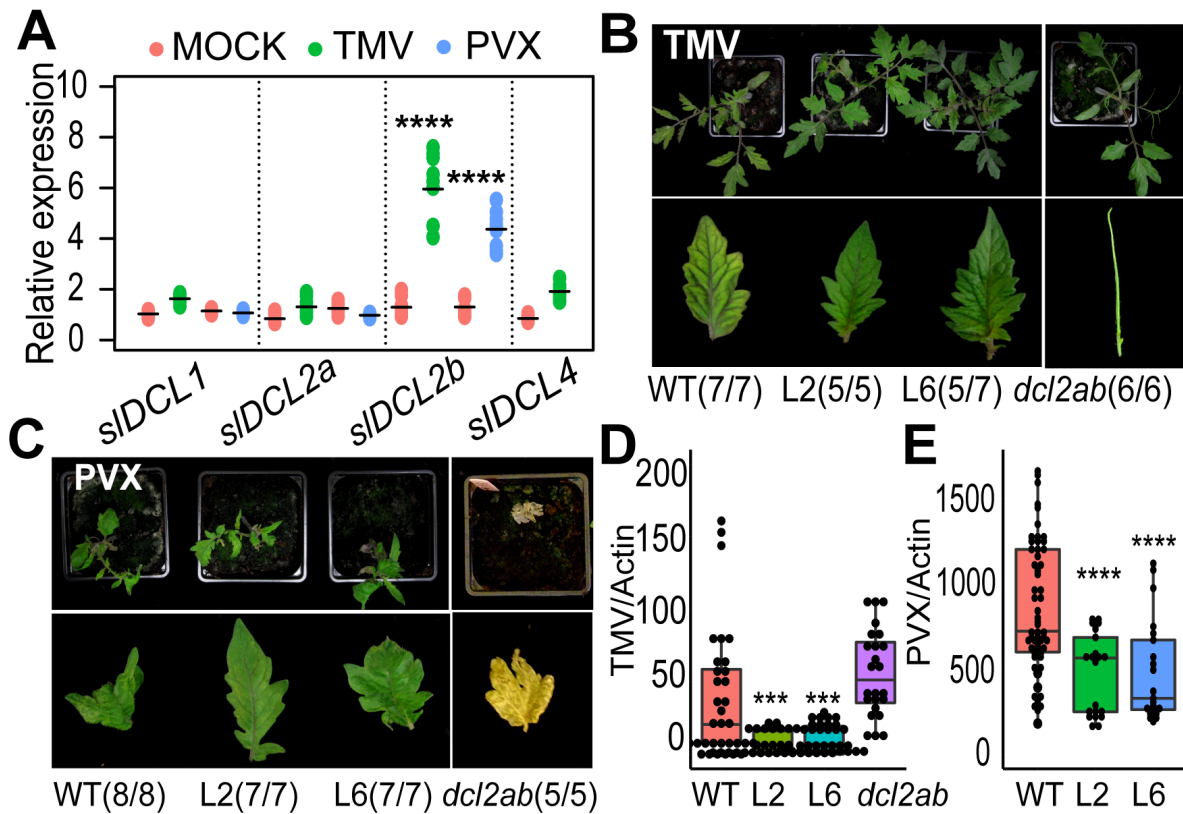
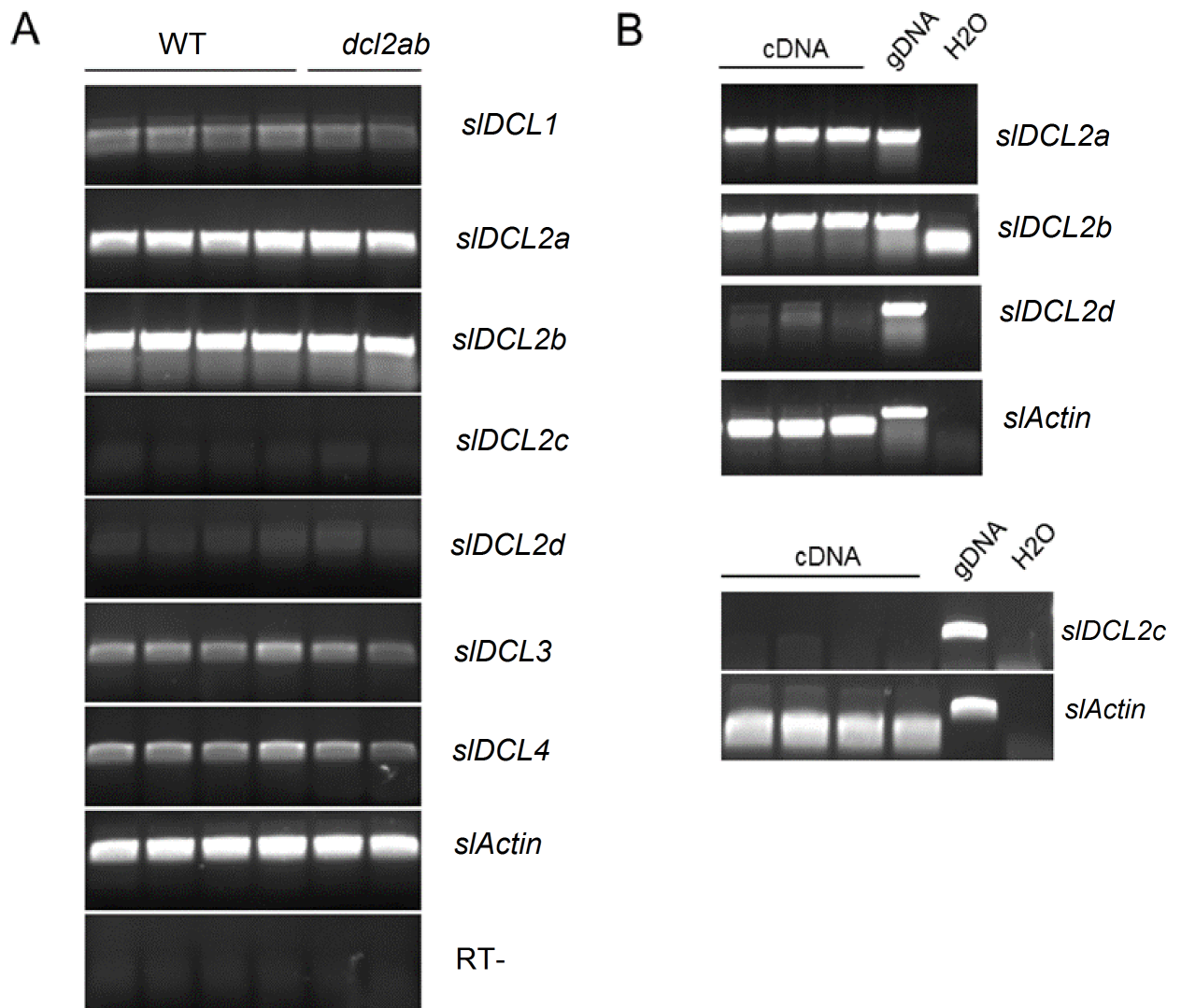
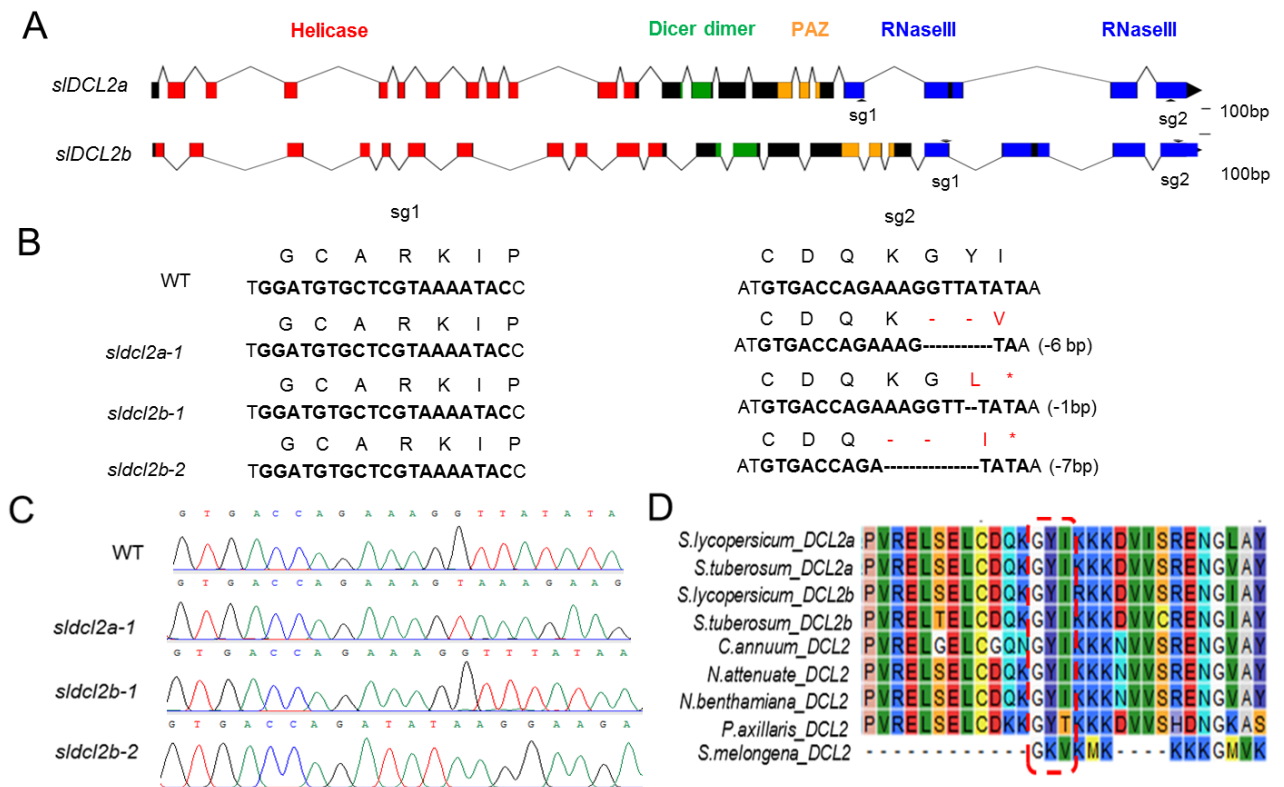


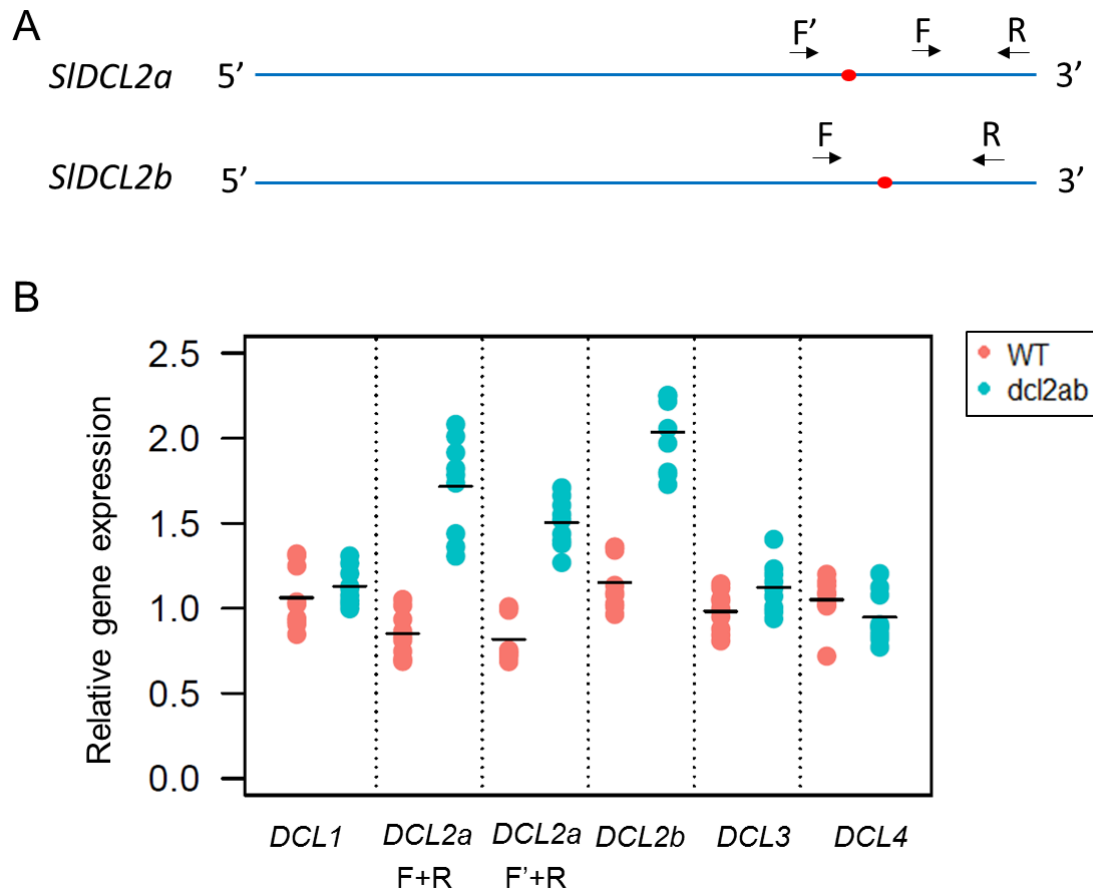
Figure 5. *sIDCL2a* and *sIDCL2b* are required for tomato antiviral defence against TMV and PVX. **(A).** qRT-PCR results of *sIDCLs* in MOCK and virus-infected samples. *slActin7* was used as an endogenous control; **(B).** Two weeks after TMV inoculation the plants showed chlorosis (WT), weak chlorosis (L2 and L6), and ‘shoestring’ (*dcl2ab*) symptoms of TMV; numbers in parenthesis show the number of plants with the indicated symptoms and the number of infected plants; **(C).** Two weeks after PVX inoculation the plants showed the growth stunting and leaf distortion symptoms (WT and target mimic lines L2 and L6) or lethality (*dcl2ab*); numbers in parenthesis show the number of plants with the indicated symptoms and the number of infected plants; **(D-E).** Real time PCR analysis of TMV or PVX in infected plants. *slActin7* was used as a control. *** $p < 0.001$, **** $p < 0.0001$.



Supplemental Figure S1. (A) RT-PCR of *sIDCLs* in M82 and the *dcl2ab* mutant. Total RNA was extracted from 24-day-old leaves and then cDNA was synthesized with oligodT primer. PCR products of 28 cycles were segregated in 1.5% agarose gel. Genomic DNA and H₂O as positive and negative controls, respectively. (B) PCR of *sIDCL2s* in M82 cDNA and genomic DNA (gDNA). PCR products were obtained from gDNA, suggesting that lack of PCR products from cDNA is due to lower gene expression instead of failure of PCR.



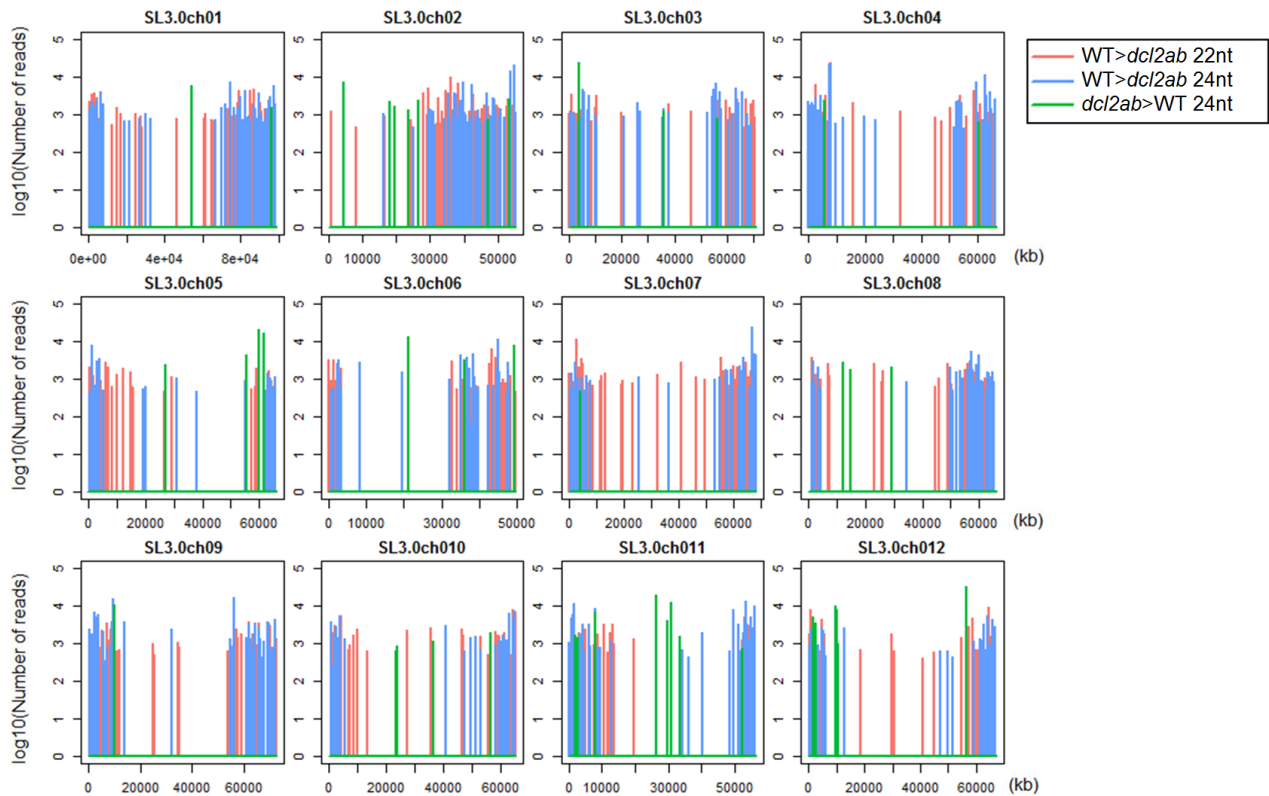
Supplemental Figure S2. *sIDCL2* mutants. **(A)** Gene structures of *sIDCL2a* and *sIDCL2b*. Exons and introns are indicated by rectangles and lines respectively. Functional domains are labelled with different colours. Small guide RNA (sgRNA) targets are marked with arrowheads; **(B)** Encoded amino acids of sgRNA target regions are shown. Amino acid changes by mutation are highlighted in red; **(C)** Sanger sequencing results of mutations; **(D)** Protein sequence alignments of DCL2 in *Solanaceae*. The mutation region is marked by red rectangle.



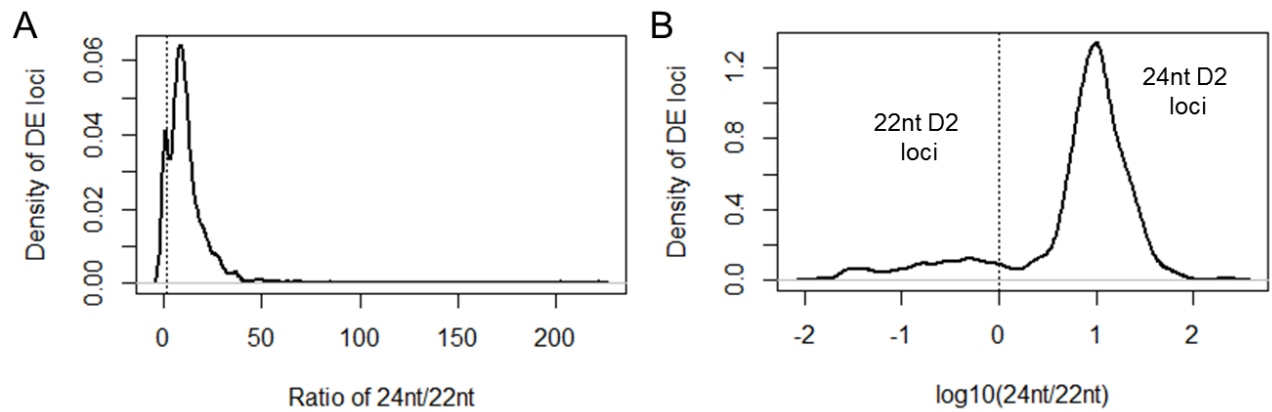
Supplemental Figure S3. (A) Schemes of RT-PCR primers of *SIDCL2a* and *SIDCL2b*. Dark blue lines represent mRNAs. Red dots indicate the mutations. Forward and reverse primers are marked with F or F' and R arrowheads; (B) RT-qPCR of *sIDCLs* in WT and the *dcl2ab* mutant. *slActin7* was used as endogenous control.



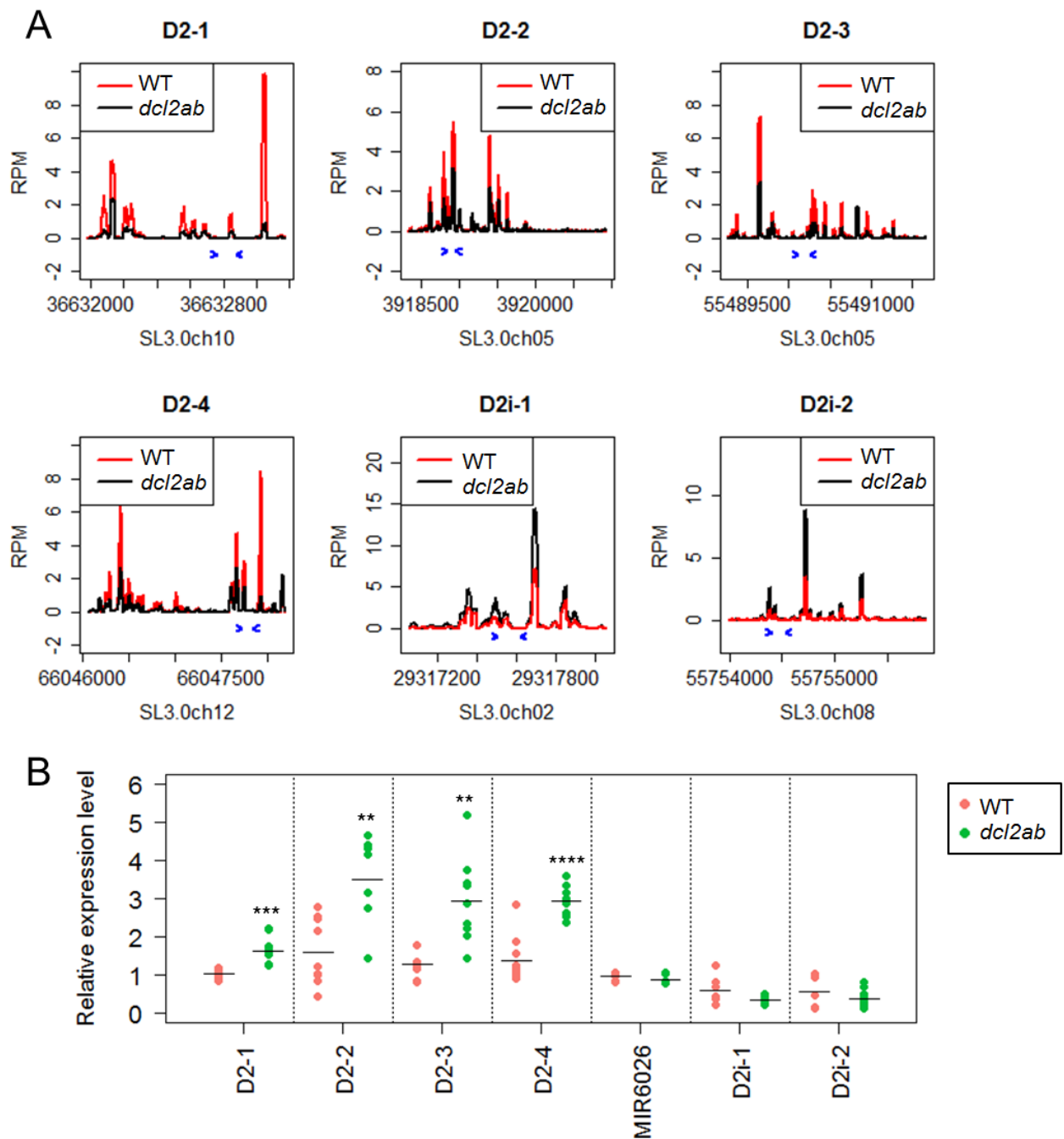
Supplemental Figure S4. Phenotypes of *dcl2a*, *dcl2b* and *dcl2ab*.



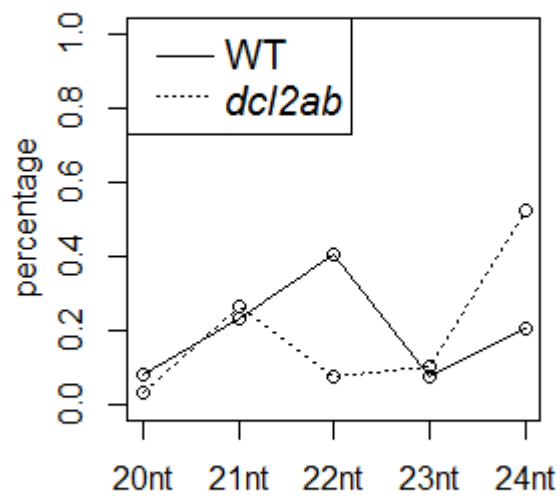
Supplemental Figure S5. Chromosomal distribution of DE loci in WT and *dcl2ab*. X-axis shows the chromosomal coordinates, and y-axis shows the log₁₀ values of sRNA reads in WT for 22nt and 24nt D2 loci and in *dcl2ab* for 24nt D2i loci.



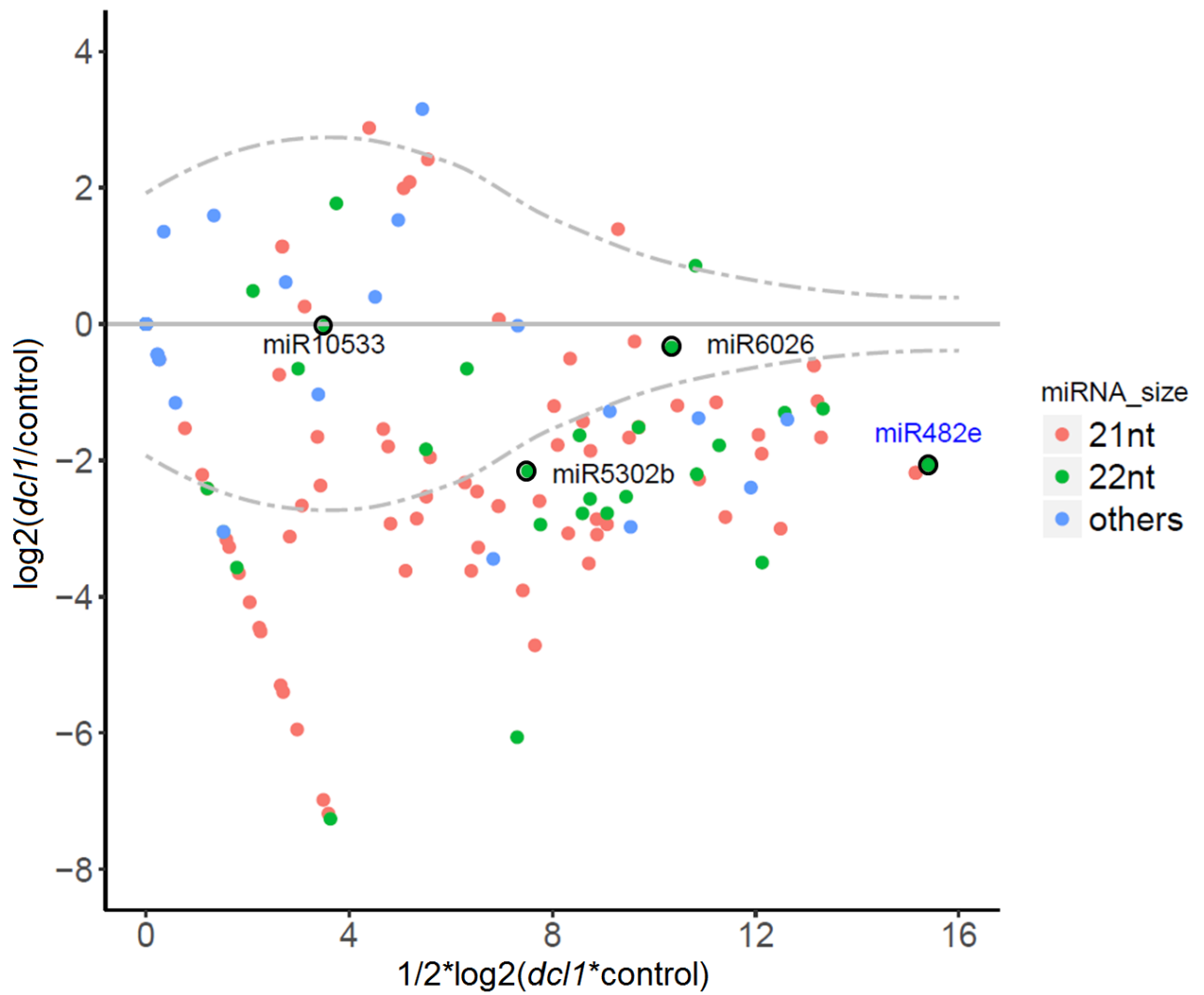
Supplemental Figure S6. Ratio of 24nt/22nt sRNA loci of the tomato genome. The sRNA were analysed for differential expression (DE) loci between WT and *dcl2ab* by segmentSeq (Hardcastle 2010). There are 1, 215 DE loci including 647 ones that are downregulated in *dcl2ab* than WT (D2 loci) and 568 that were upregulated in *dcl2ab* (D2i loci). Kernel density plots show the density of D2 loci vs the ratio of 24nt sRNA: 22nt sRNA within each locus (**A**) or the \log_{10} value of ratio (**B**). Vertical lines indicate 24nt:22nt=1 so that loci on the left are 22nt predominant D2 loci and those on the right are 24nt predominant D2 loci.



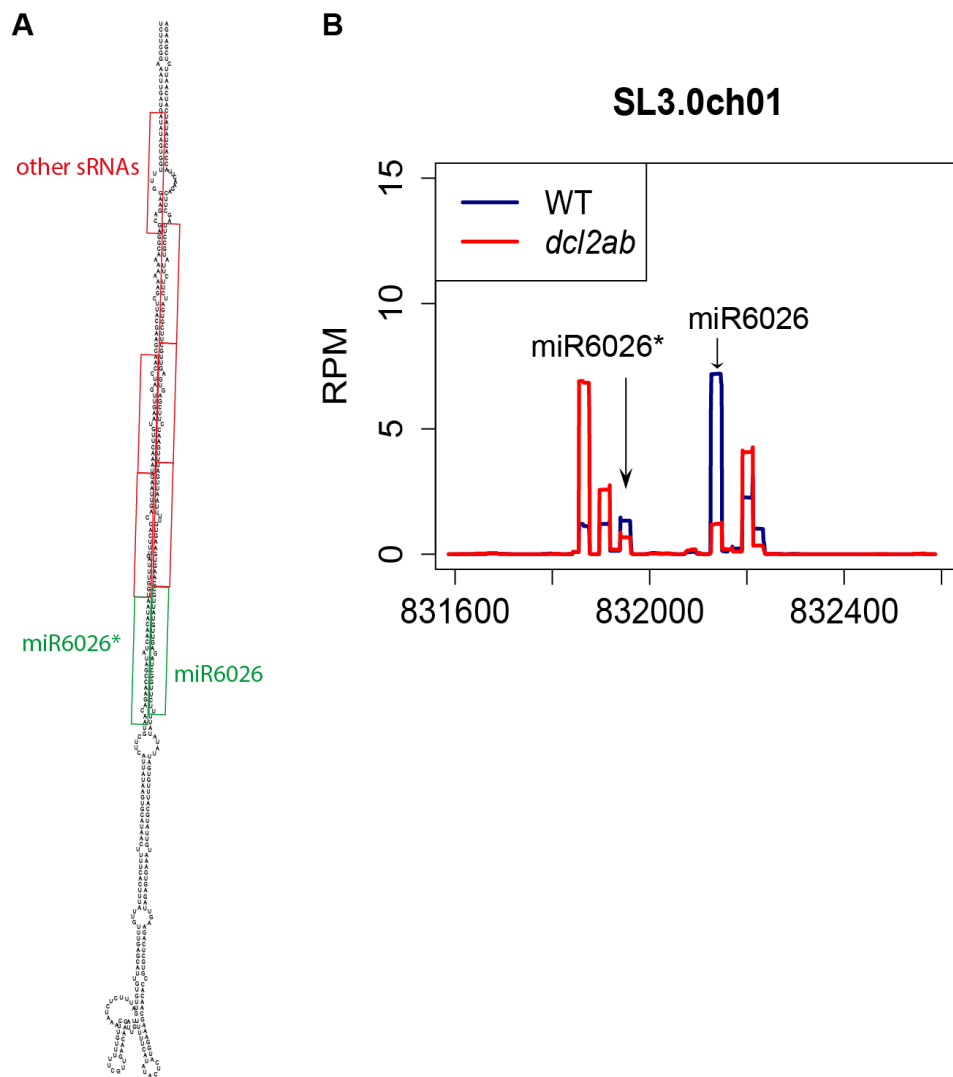
Supplemental Figure S7. A. sRNA RPM plots showing accumulation of sRNAs mapped to five D2 and two D2i loci in WT and *dcl2ab*. Primers used in **B** are marked with arrowheads; **B.** RT-qPCR results of D2 and D2i precursors, including pre-miR6026, in WT and *dcl2ab*. *slActin* was used as control. ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$.



Supplemental Figure S8. 24-nt D2i sRNA regions produce more 22-nt sRNAs in WT than *dcl2ab*. 24-nt D2i sRNA sequences were collected and used as Bowtie alignment reference of WT and *dcl2ab* sRNA sequencing data. Percentage shows the composition of different sizes of sRNAs from the 24-nt D2i sRNA regions in WT and *dcl2ab*.

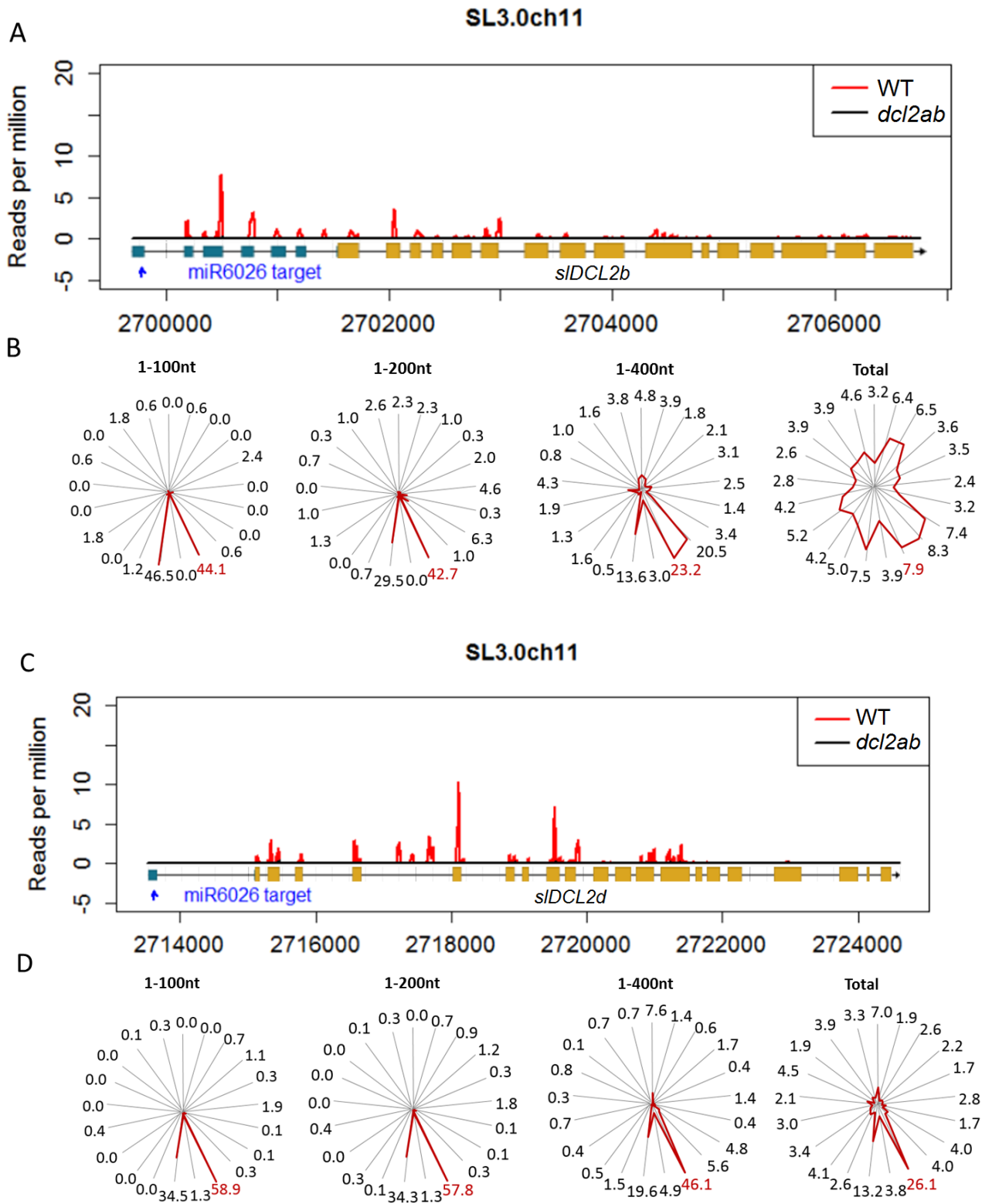


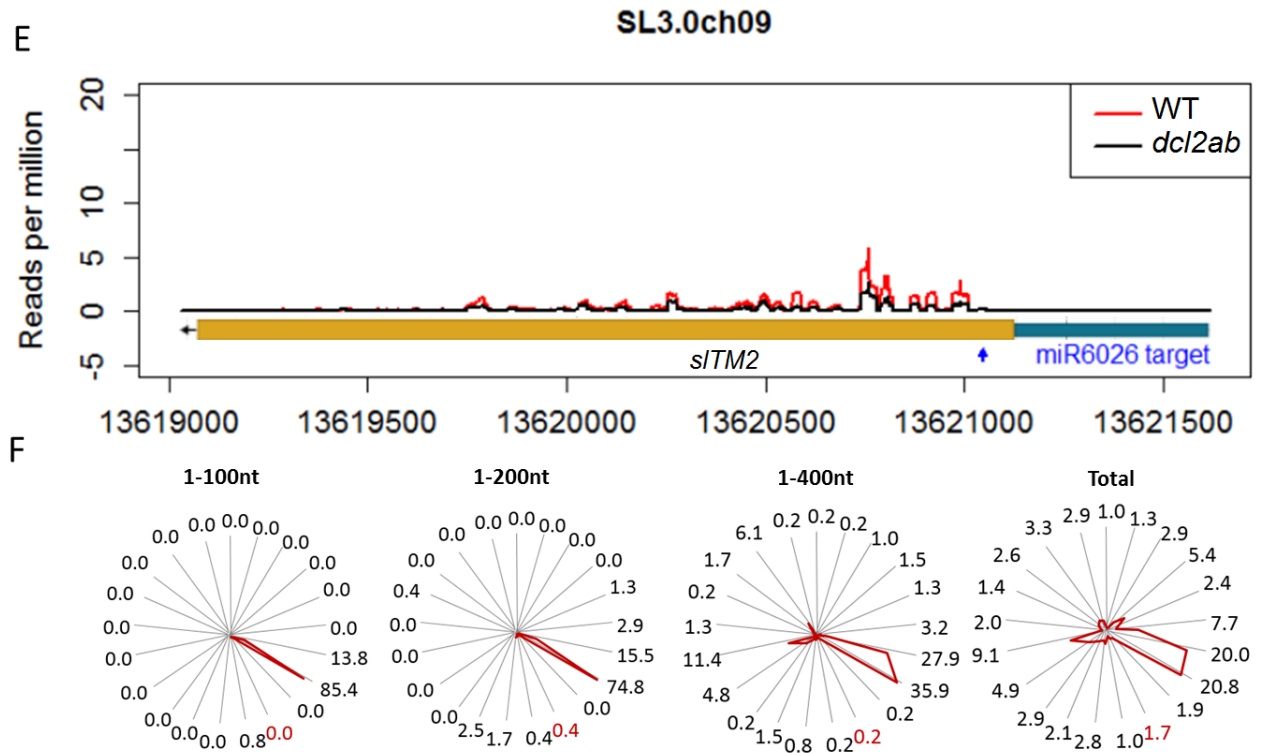
Supplemental Figure S9. MA Plot showing miRNA abundance in WT and *dcl1* by re-analyzing published *dcl1* sRNA-seq data (Kravchik et al. 2014). 21-nt and 22-nt sizes of miRNAs are shown in different colours. Three siDCL2-dependent miRNAs (miR6026, miR5302b and miR10533) and one siDCL1-dependent miRNA (miR482e) are marked.



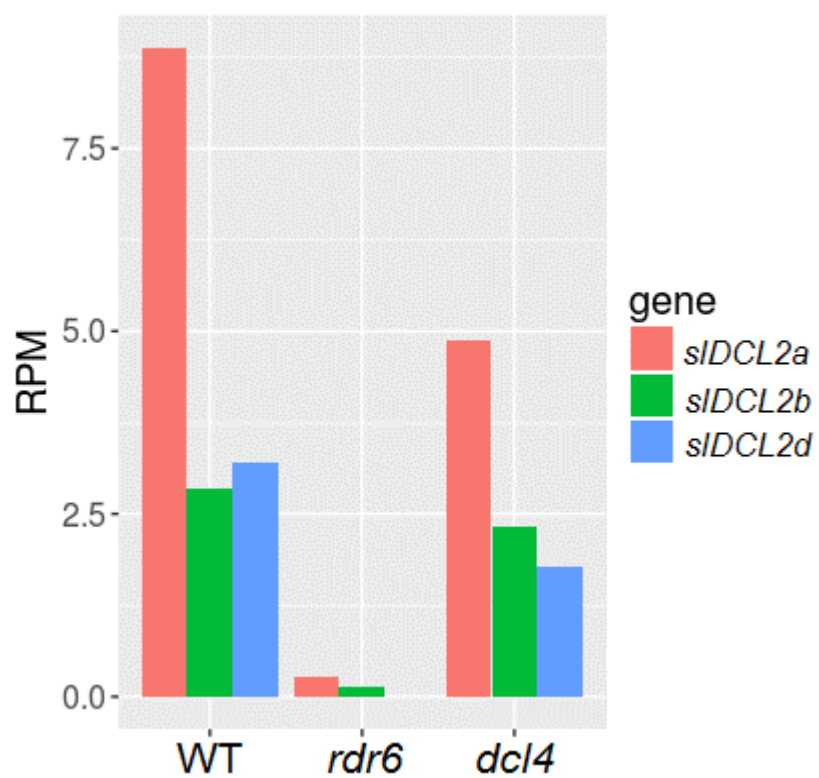
Supplemental Figure S10. A. Stem loop structure of miR6026 precursor.

miR6026/miR6026* and other sRNAs are marked in green and red, respectively. **B.** sRNA RPM plots showing accumulations of sRNAs from pre-miR6026 in WT and *dcl2ab*. Mature miR6026 and miR6026* are marked with arrowheads.

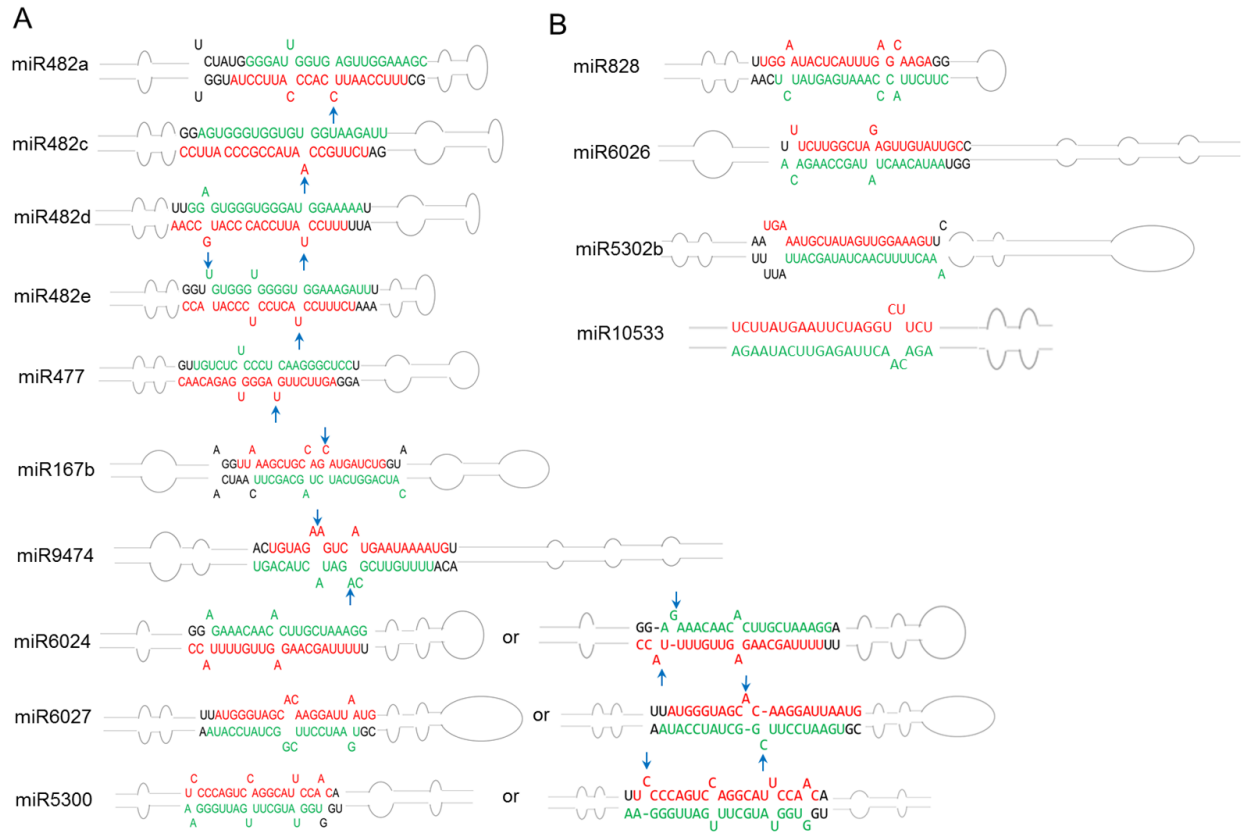




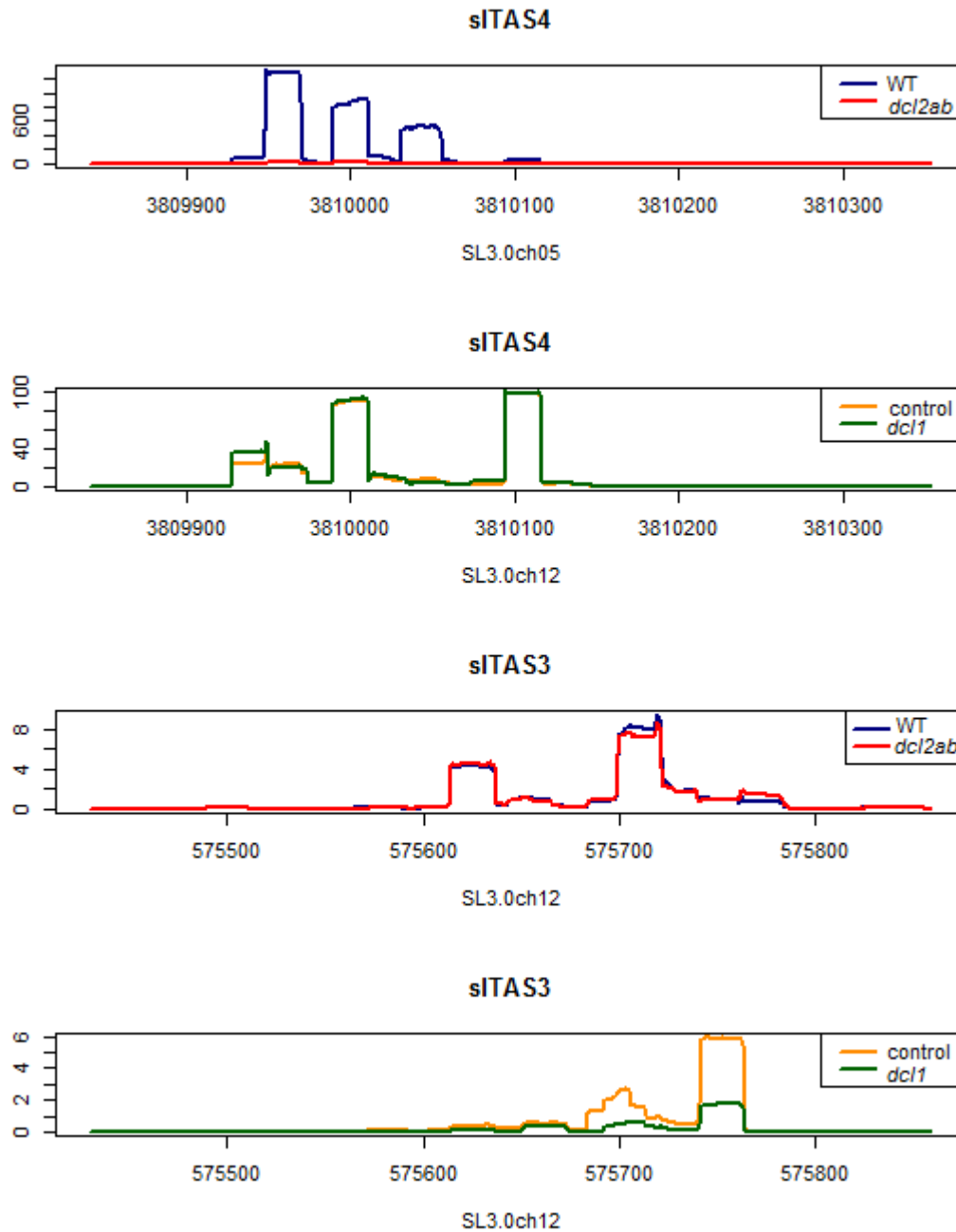
Supplemental Figure S11. Accumulation of *sIDCL2b* and *sIDCL2d* sRNA, not *sITM2* sRNA, is reduced in *dcl2ab*. (**A, C, E**) sRNA RPM plots showing the levels of *sIDCL2a*, *sIDCL2d*, and *sITM2* sRNAs in WT and *dcl2ab*. The p-values of *sIDCL2a*, *sIDCL2b*, *sIDCL2d* and *sITM2* sRNA between WT and *dcl2ab* are 0.01, 0.0008, 0.003 and 0.11, respectively. In the gene models, rectangles and lines represent exons and introns, respectively. UTRs and ORFs are in cyan and yellow, respectively. Arrows mark the direction of transcription. Target site of miR6026 is marked with blue arrowhead; (**B, D, F**) The phasing of *sIDCL2a*, *sIDCL2d* and *sITM2* sRNAs in WT. Radar plots show percentages of 21-nt reads corresponding to each of the 21 registers from the whole transcript of *sIDCL2b*, or 1-100nt, 1-200nt, 1-400nt of the *sIDCL2b* transcript in WT sRNA-seq data. The 10th position (in red) indicates the miR6026-guided cleavage site between the 10th and 11th nucleotide of miR6026.



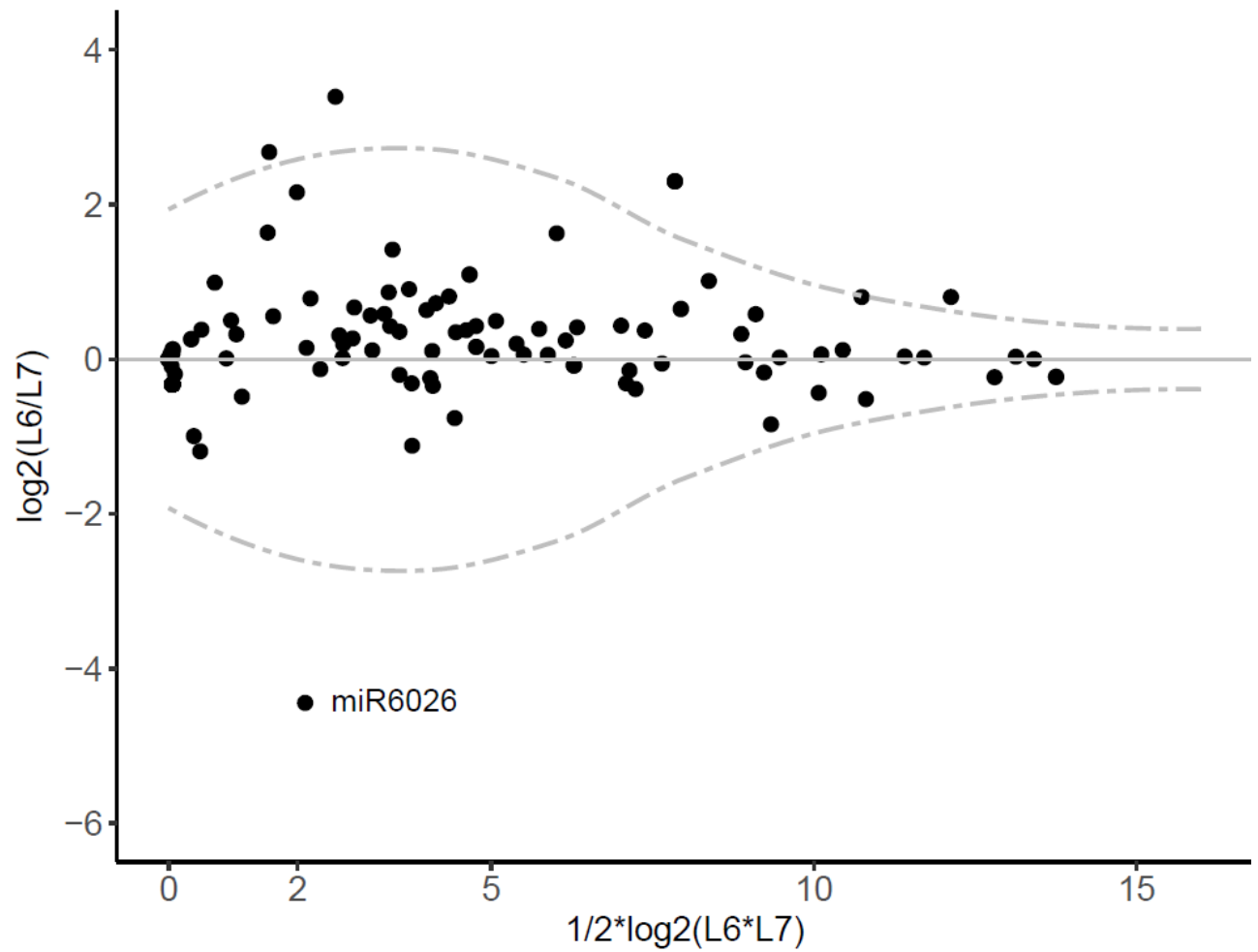
Supplemental Figure S12. RPM plot of *SIDCL2* sRNA in WT, *rdr6*, and *dcl4*.



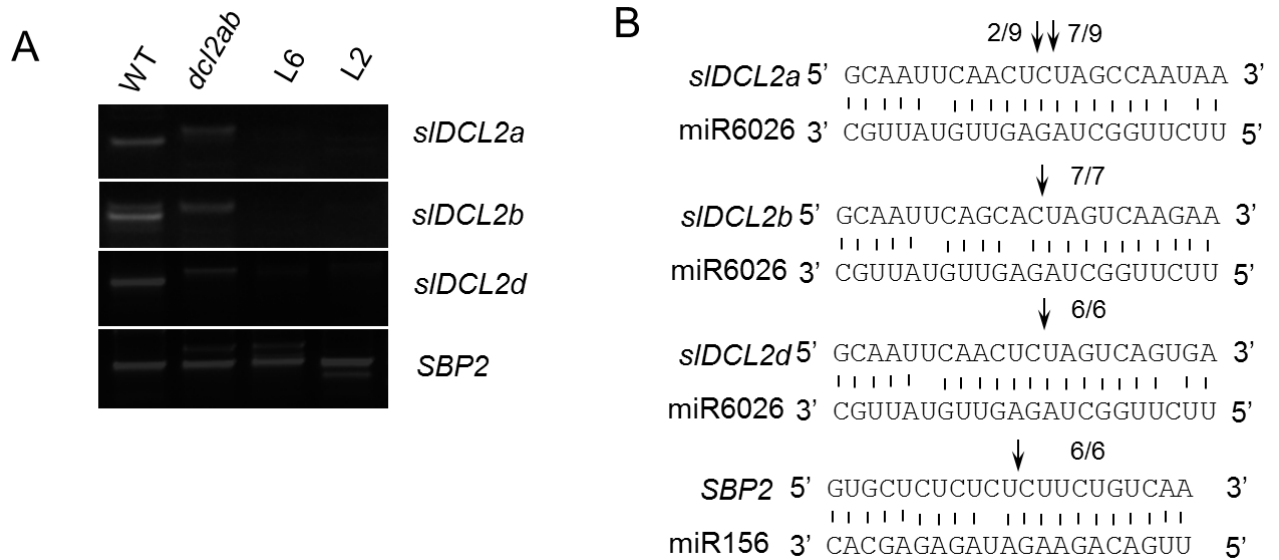
Supplemental Figure S13. miRNA foldback structures of sIDCL1-dependent 22-nt miRNAs (A) and sIDCL2-dependent 22-nt miRNAs (B). Arrows indicate the predicted asymmetric positions within the foldbacks.



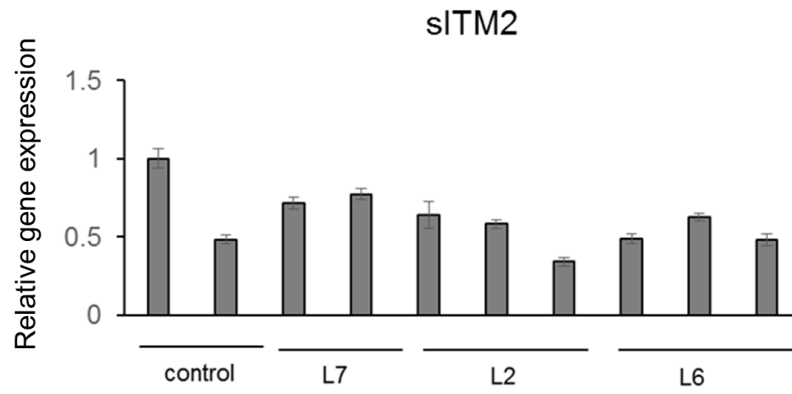
Supplemental Figure S14. The sRNA RPM plots showing the levels of tasiRNAs of sITAS4/sITAS3 in WT, *dcl1*, and *dcl2ab* For sRNA analysis in *dcl1*, as the *dcl1* samples differed drastically in miRNA from the control samples, we normalized sRNA to reads number of 24-nt sRNA in each sample, instead of reads number of total sRNA.



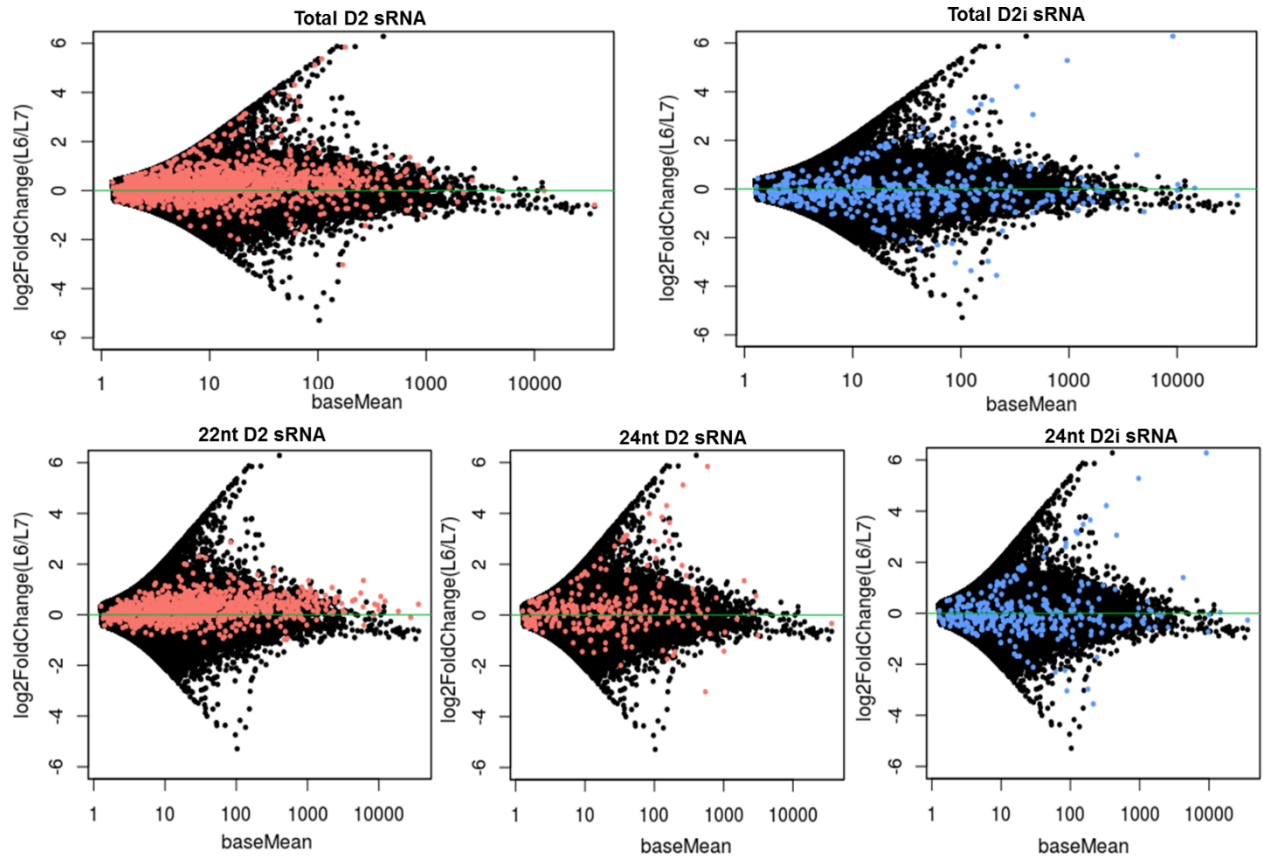
Supplemental Figure S15. MA Plot showing individual miRNA abundance levels in target mimic lines L7 (weak line) and L6 (strong line). Significantly differential expressed miRNAs ($p < 0.05$) between L7 and L6 are marked.



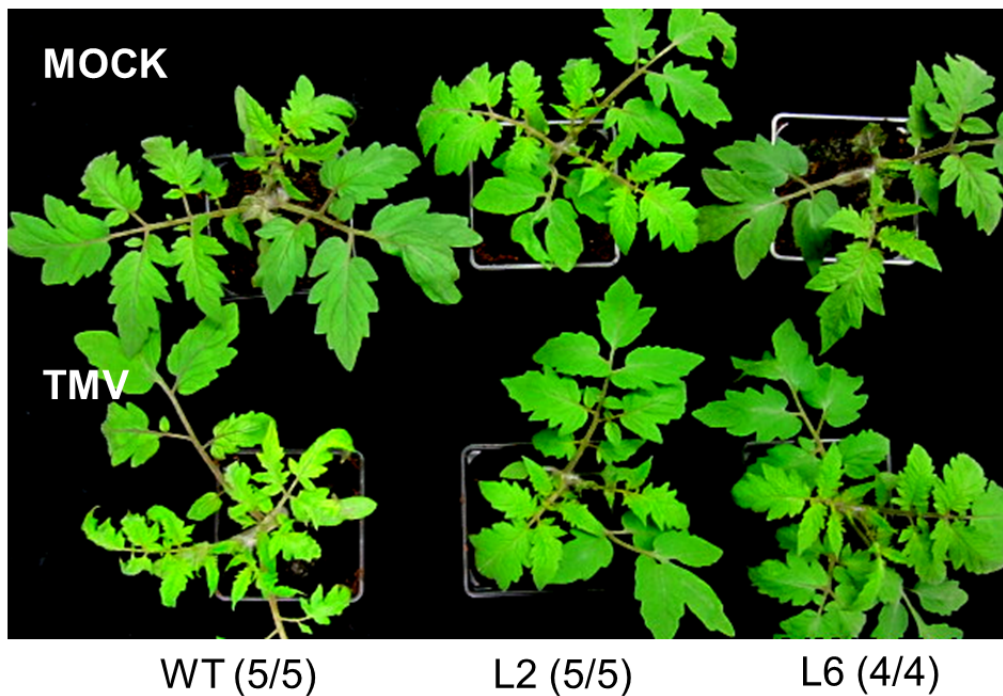
Supplemental Figure S16. Validation of miR6026-targeted *sIDCL2* mRNA cleavage sites by 5'-RLM-RACE. **A.** RLM-RACE PCR results of 3' fragments of cleaved *sIDCL2* mRNA from WT, *dcl2ab* and target mimic lines (L2 and L6), with *SBP2* as control; **B.** Sanger sequencing results of amplified products from WT showed in **A.** The arrows indicate the cleavage sites and the numbers show the frequency of clones sequenced.



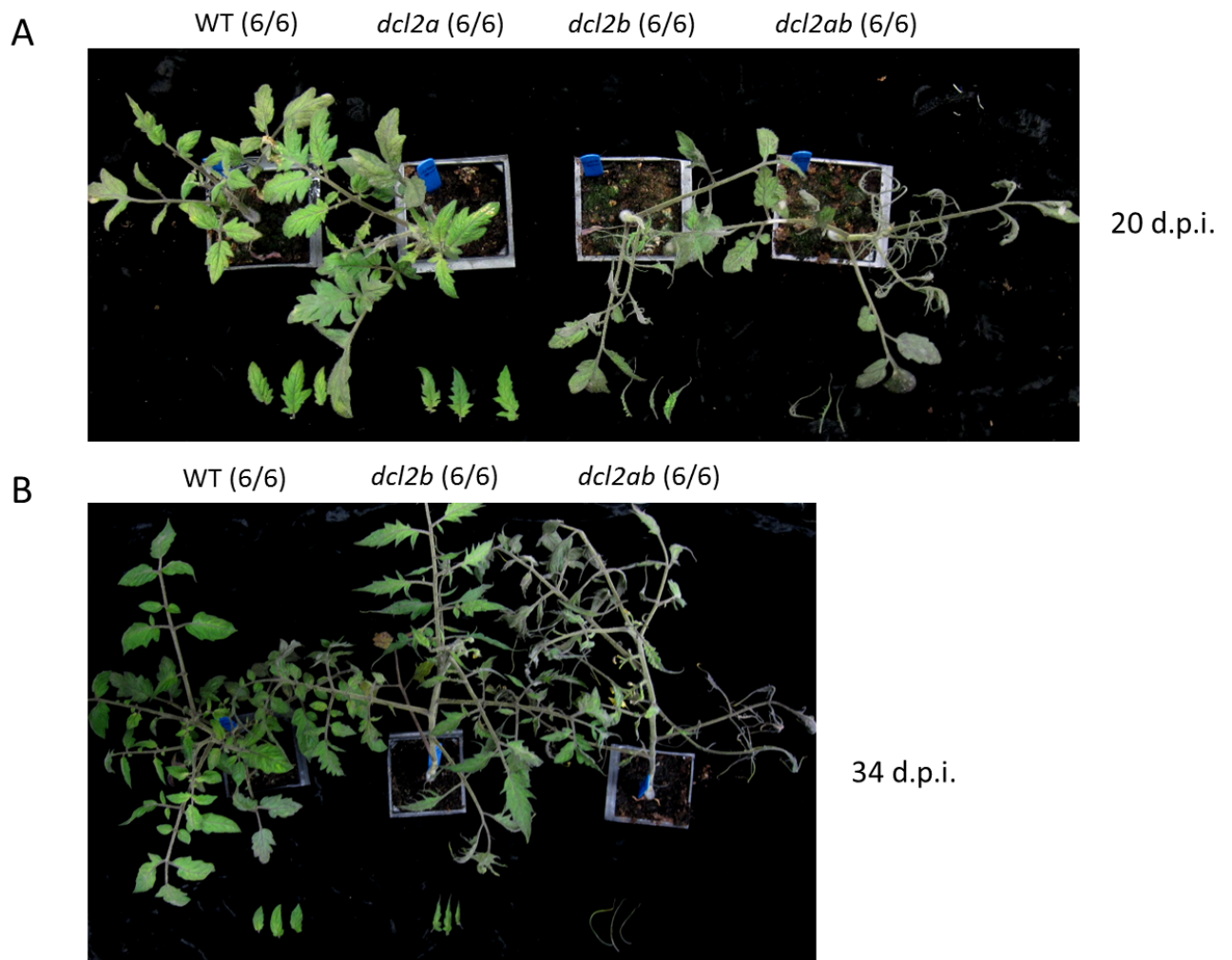
Supplemental Figure S17. Knock down of miR6026 does not affect the transcript level of *sITM2*. QRT-PCR of *sITM2* in control, weak mimicry line (L7), and strong mimicry lines (L2 and L6). *sActin7* was used as endogenous control.



Supplemental Figure S18. MA plot showing accumulation of D2 and D2i sRNAs in L7 (weak mimic line) and L6 (strong mimic line). X axis represents the mean of normalized counts for each sRNA, whereas Y axis represents the $\log_2(\text{RPM}_{L6}/\text{RPM}_{L7})$ of each sRNA. D2 and D2i sRNAs are coloured in red and blue, respectively; Different sizes of D2 and D2i sRNAs are marked.

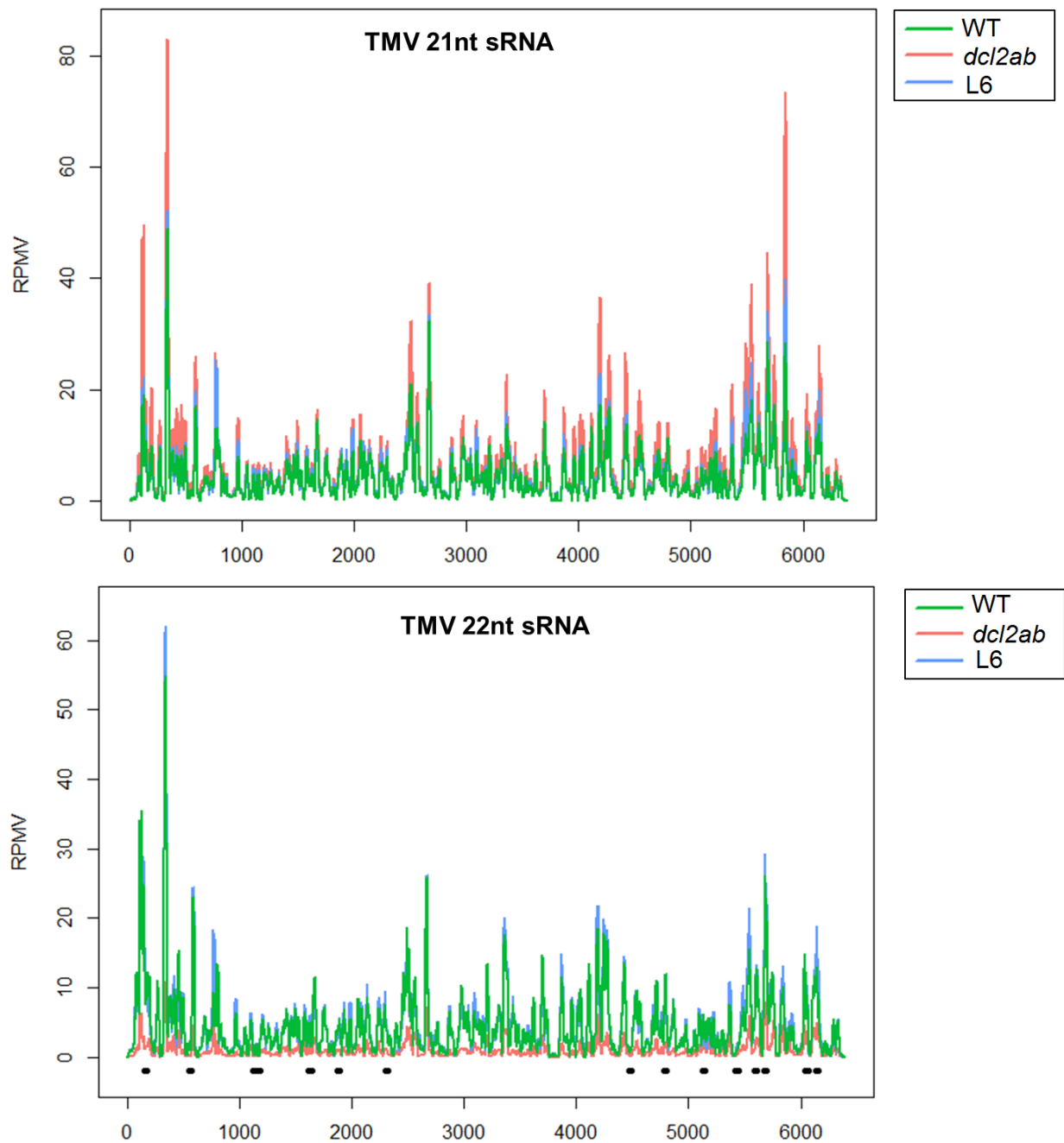


Supplemental Figure S19. Plants of two weeks after MOCK and TMV infection showing chlorosis and weaker chlorosis phenotypes of TMV infected WT and target mimic lines (L2 and L6), respectively; numbers in parenthesis show the number of plants with the representative symptoms and the number of infected plants

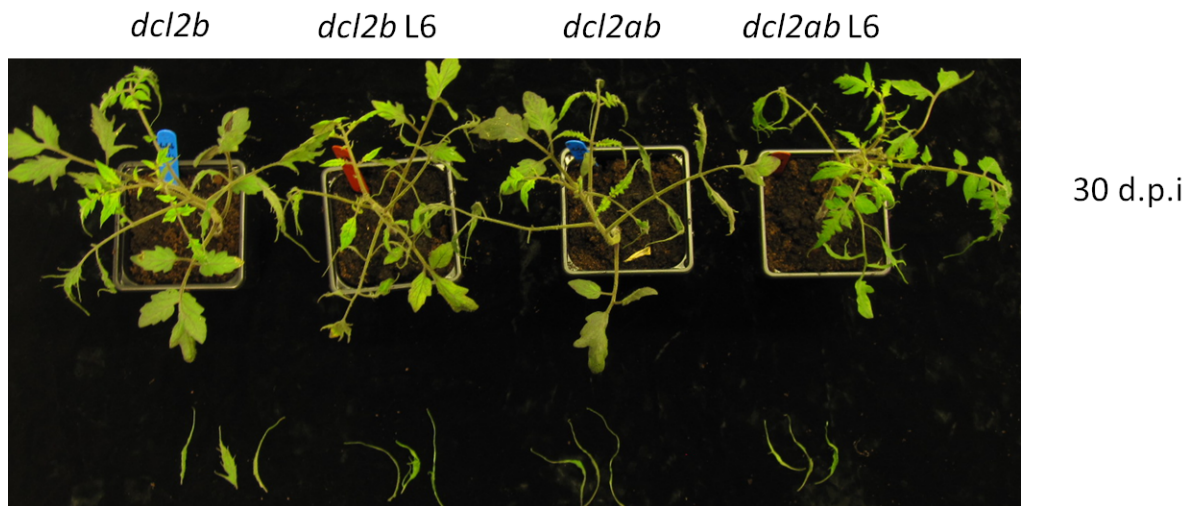


Supplemental Figure S20. Plants and leaves of 20 days (A) and 34 days (B)

after TMV infection; Numbers in parenthesis show the number of plants with the representative symptoms and the number of infected plants. d. p. i., days post infiltration.

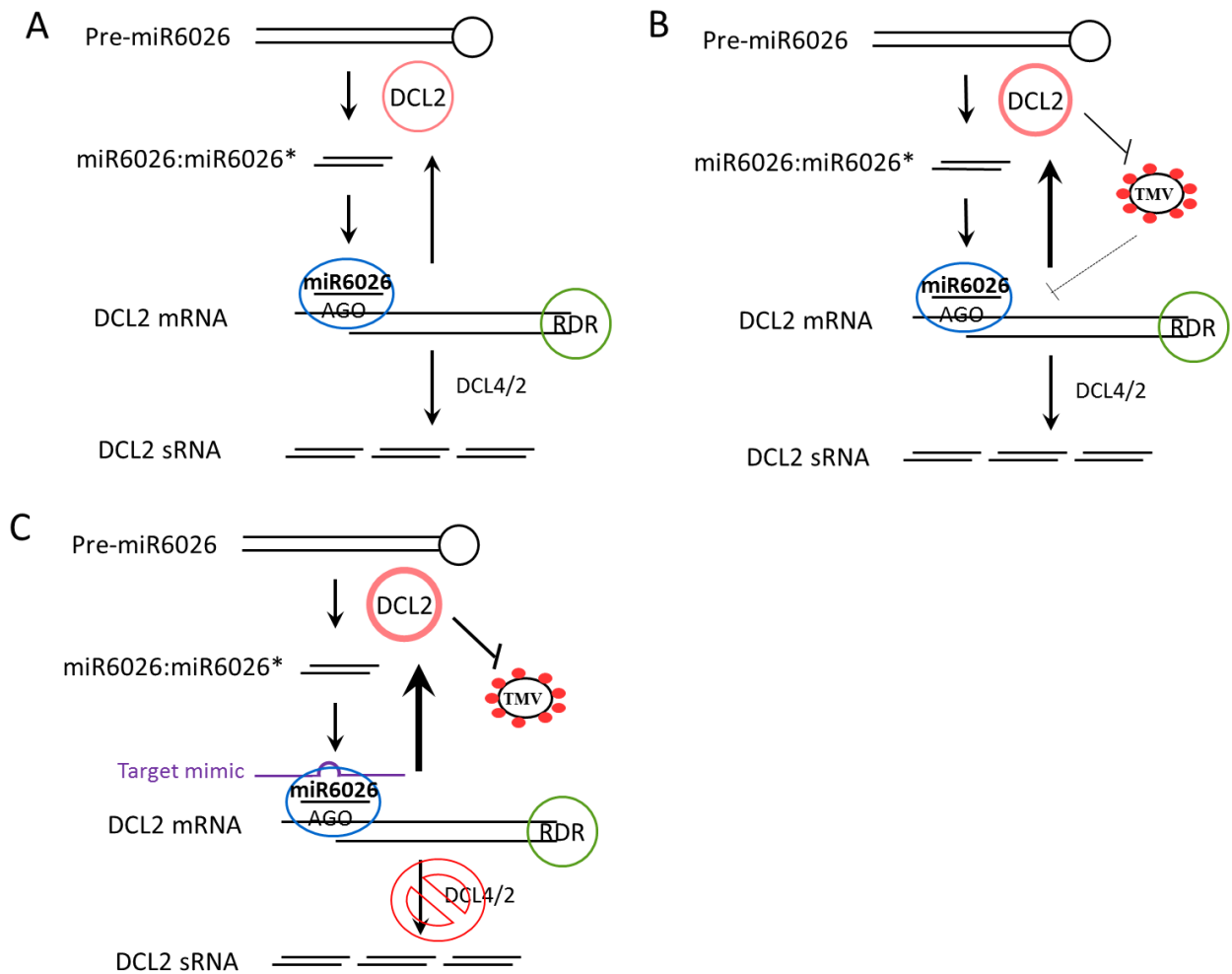


Supplemental Figure S21. The sRNA RPM plots showing the levels of TMV siRNAs in infected WT, *dcl2ab* and L6. The X axis indicates corresponding genome of TMV, the Y axis indicates the RPMV values (RPM normalized by TMV virus RNA amounts). Short bars under plots represent significantly ($p < 0.01$) upregulated 22nt sRNA in L6.



Supplemental Figure S22. Plants and leaves of 30 days after TMV infection.

dcl2b L6 and *dcl2ab* L6 indicate *dcl2b* and *dcl2ab* plants with miR6026 target mimic through crossing with L6 respectively.



Supplemental Figure S23. Proposed working models. **(A)** Under normal condition, miR6026 is produced by SIDCL2 and targets SIDCL2 mRNA to generate secondary sRNA; **(B)** TMV infection upregulates SIDCL2b possibly through inhibiting miR6026-targeting of SIDCL2. Upregulate SIDCL2 contributes anti-viral function. **(C)** Target mimic eliminates miR6026 and thus prevents SIDCL2 from being targeted. Upregulate SIDCL2 elevates anti-viral activity.

Supplementary Table S1. Mutant alleles of *sIDCL2a* and *sIDCL2b*.

Mutant	<i>sIDCL2a</i> genotypes	<i>sIDCL2b</i> genotypes
<i>sldcl2a-1</i>	<i>sldcl2a-1</i> homozygous	WT
<i>sldcl2b-1</i>	WT	<i>sldcl2b-1</i> homozygous
<i>sldcl2b-2</i>	WT	<i>sldcl2b-2</i> homozygous
<i>sldcl2a-1sldcl2b-1</i>	<i>sldcl2a-1</i> homozygous	<i>sldcl2b-1</i> homozygous
<i>sldcl2a-1sldcl2b-2</i>	<i>sldcl2a-1</i> homozygous	<i>sldcl2b-2</i> homozygous

Supplementary Table S2. sIDCL2-dependent sRNAs.

seqnames	start	end	strand	length	baseMean	log2FoldCl	padj
SL3.0ch00	4255153	4255174	-	22	26.74877	3.254334	0.006803
SL3.0ch00	11567404	11567427	-	24	34.03198	3.358045	0.001109
SL3.0ch00	12583935	12583956	-	22	189.8168	3.628131	5.74E-10
SL3.0ch00	15258117	15258140	+	24	128.7627	2.007205	0.004925
SL3.0ch00	16276286	16276307	+	22	19.04879	4.328607	0.008727
SL3.0ch00	19089291	19089312	+	22	73.58861	4.113347	2.55E-07
SL3.0ch00	19089292	19089313	+	22	259.9989	3.789208	2.06E-08
SL3.0ch00	19089294	19089315	+	22	24.9268	3.473485	0.004132
SL3.0ch00	19241952	19241973	+	22	111.3901	5.857142	5.91E-11
SL3.0ch00	19242579	19242600	-	22	24.18646	6.283037	0.005751
SL3.0ch00	19658538	19658560	+	23	70.12387	2.357281	0.001213
SL3.0ch00	19658539	19658560	+	22	155.1489	5.447291	3.7E-14
SL3.0ch00	19658836	19658857	-	22	21.59522	5.092882	0.004311
SL3.0ch01	525248	525271	+	24	19.67102	4.957689	0.007816
SL3.0ch01	525249	525271	+	23	16.10771	7.125588	0.002369
SL3.0ch01	832126	832145	+	20	12.53573	6.765316	0.006298
SL3.0ch01	832126	832147	+	22	186.4461	7.208075	2.12E-14
SL3.0ch01	3627462	3627485	+	24	152.8215	2.226179	0.003518
SL3.0ch01	3755488	3755507	+	20	13.79646	6.904514	0.004934
SL3.0ch01	3755521	3755541	-	21	111.3832	1.866078	0.005894
SL3.0ch01	3755568	3755589	+	22	45.36224	5.230151	4.35E-06
SL3.0ch01	3755569	3755590	+	22	23.01412	5.24474	0.003748
SL3.0ch01	3755571	3755592	+	22	287.2805	6.823359	1.04E-19
SL3.0ch01	3755587	3755607	+	21	1021.482	2.060741	0.000991
SL3.0ch01	3755863	3755884	+	22	50.81737	7.333951	0.000321
SL3.0ch01	4336340	4336362	+	23	21.59747	5.152893	0.004926
SL3.0ch01	4513865	4513888	+	24	23.98009	3.641289	0.002717
SL3.0ch01	6154635	6154657	-	23	53.44027	2.488494	0.006301
SL3.0ch01	6156059	6156082	-	24	215.6186	2.542611	0.003512
SL3.0ch01	6156060	6156082	-	23	26.94021	4.028846	0.002081
SL3.0ch01	6381015	6381035	+	21	61.62963	6.63404	3.63E-06
SL3.0ch01	6381016	6381036	+	21	255.3076	8.09062	4.35E-14
SL3.0ch01	6381016	6381035	+	20	75.57	9.362951	9.71E-07
SL3.0ch01	11806932	11806953	-	22	13.68992	6.887964	0.005872
SL3.0ch01	16662986	16663007	+	22	18.03873	7.285263	0.00214
SL3.0ch01	16663695	16663716	+	22	29.81611	5.506561	0.00167
SL3.0ch01	16663698	16663719	+	22	17.36676	7.229097	0.00228
SL3.0ch01	29195954	29195977	-	24	28.42756	3.315888	0.003869
SL3.0ch01	31664478	31664501	+	24	27.67819	4.07531	0.001966
SL3.0ch01	31933483	31933504	-	22	27.62158	4.507825	0.000587
SL3.0ch01	32848325	32848346	+	22	30.30002	5.012581	0.000464
SL3.0ch01	52753385	52753406	+	22	41.44518	4.14216	9.31E-05
SL3.0ch01	54387657	54387678	-	22	40.38446	4.99201	3.17E-05
SL3.0ch01	54387659	54387680	-	22	212.1409	6.58645	1.76E-16
SL3.0ch01	54387662	54387683	-	22	24.01652	4.670087	0.001812
SL3.0ch01	54387806	54387827	-	22	71.98707	3.750478	6.01E-06
SL3.0ch01	54388289	54388310	-	22	24.9822	4.323068	0.002717

SL3.0ch01	54388290	54388311	-	22	29.09575	6.523712	0.003163
SL3.0ch01	54388291	54388312	-	22	35.59448	2.940697	0.002688
SL3.0ch01	54389304	54389325	+	22	30.60887	5.653935	0.001003
SL3.0ch01	54389988	54390009	-	22	14.12318	6.936969	0.003896
SL3.0ch01	54390048	54390069	-	22	40.36198	4.708045	2.26E-05
SL3.0ch01	54390069	54390090	-	22	22.02328	5.126505	0.003426
SL3.0ch01	54390070	54390091	-	22	46.26166	3.759192	1.78E-05
SL3.0ch01	54390072	54390093	-	22	23.00057	3.351852	0.00711
SL3.0ch01	54390295	54390317	-	23	29.67753	4.982788	0.000353
SL3.0ch01	54390295	54390316	-	22	65.19081	5.760084	2.54E-07
SL3.0ch01	54391271	54391292	+	22	12.37656	6.74468	0.007881
SL3.0ch01	54391923	54391944	-	22	23.61679	3.319761	0.009797
SL3.0ch01	54392348	54392369	+	22	24.86942	3.949665	0.003005
SL3.0ch01	64055911	64055932	-	22	45.58973	4.8876	7.6E-06
SL3.0ch01	64056194	64056215	-	22	34.75599	3.251209	0.000704
SL3.0ch01	64056210	64056232	-	23	97.1244	2.093497	0.002454
SL3.0ch01	64056214	64056235	-	22	186.1735	3.364605	1.68E-07
SL3.0ch01	64056215	64056236	-	22	19.8675	4.969671	0.006893
SL3.0ch01	64056216	64056237	-	22	39.38688	4.612299	1.46E-05
SL3.0ch01	64057505	64057526	-	22	73.15422	5.582376	3.31E-08
SL3.0ch01	64057506	64057527	-	22	19.8945	4.449182	0.009265
SL3.0ch01	64057528	64057549	-	22	22.58309	4.471956	0.004985
SL3.0ch01	64057542	64057563	-	22	24.81347	3.909977	0.002167
SL3.0ch01	64057857	64057879	-	23	41.84726	7.073448	0.00094
SL3.0ch01	64057900	64057921	-	22	20.07921	4.404031	0.006226
SL3.0ch01	64057918	64057939	-	22	52.40875	4.588353	2.8E-06
SL3.0ch01	64057970	64057991	-	22	140.6942	3.8521	1.93E-09
SL3.0ch01	64057971	64057992	-	22	26.04069	7.815084	0.000404
SL3.0ch01	64058484	64058505	-	22	25.41335	4.709378	0.001365
SL3.0ch01	64058877	64058898	-	22	22.95425	7.635424	0.000512
SL3.0ch01	66009478	66009499	-	22	39.0149	3.500546	0.000597
SL3.0ch01	66009479	66009500	-	22	127.3492	5.774671	1.89E-10
SL3.0ch01	72173531	72173554	-	24	77.25563	2.157294	0.002529
SL3.0ch01	74332922	74332945	-	24	34.59254	3.03458	0.002154
SL3.0ch01	74332923	74332946	-	24	28.65469	3.23968	0.002533
SL3.0ch01	76989278	76989297	-	20	40.95837	7.02306	0.000837
SL3.0ch01	76989286	76989307	-	22	86.86817	4.471757	3.04E-09
SL3.0ch01	76989363	76989384	+	22	23.75819	4.659514	0.001749
SL3.0ch01	76989364	76989385	+	22	22.03403	4.54422	0.003129
SL3.0ch01	76989445	76989466	-	22	30.04802	6.597349	0.002606
SL3.0ch01	76989571	76989592	-	22	27.82956	7.913535	0.000207
SL3.0ch01	76989572	76989593	-	22	87.83464	7.177683	3E-07
SL3.0ch01	76989573	76989594	-	22	56.94914	5.468436	6.27E-07
SL3.0ch01	76989575	76989596	-	22	48.71072	5.340043	6.21E-06
SL3.0ch01	76989576	76989597	-	22	67.99514	4.422741	1.8E-07
SL3.0ch01	76989577	76989598	-	22	198.8898	5.692511	1.37E-15
SL3.0ch01	76989578	76989599	-	22	39.60279	4.525708	0.000194
SL3.0ch01	76989580	76989601	-	22	27.67522	5.510817	0.001424
SL3.0ch01	76989581	76989602	-	22	16.58962	7.172756	0.002727

SL3.0ch01	76989582 76989603 -	22	29.82586	8.019451	0.000119
SL3.0ch01	76989597 76989618 +	22	14.77869	7.005875	0.003084
SL3.0ch01	76989607 76989628 +	22	257.5142	6.331149	2.75E-16
SL3.0ch01	76989608 76989629 +	22	34.96485	5.80087	0.000287
SL3.0ch01	76989781 76989802 +	22	21.93777	4.081904	0.003977
SL3.0ch01	76989867 76989888 +	22	96.83869	6.738165	5.03E-09
SL3.0ch01	76989877 76989898 +	22	28.40365	3.893667	0.000704
SL3.0ch01	76989885 76989906 +	22	39.0243	8.406238	3.59E-05
SL3.0ch01	76989970 76989991 -	22	55.20939	4.45047	6.65E-07
SL3.0ch01	76989977 76989998 +	22	52.08927	6.350222	1.42E-05
SL3.0ch01	76990025 76990046 +	22	22.04299	5.128013	0.004193
SL3.0ch01	76990030 76990051 +	22	13.63408	6.884568	0.004611
SL3.0ch01	76990106 76990127 +	22	12.69643	6.77668	0.007544
SL3.0ch01	76990129 76990150 +	22	94.63349	6.296964	1.12E-09
SL3.0ch01	76990161 76990182 +	22	26.02612	4.426793	0.001238
SL3.0ch01	76990249 76990270 +	22	26.24638	4.713258	0.001162
SL3.0ch01	76990255 76990276 +	22	351.7356	3.45152	2.41E-12
SL3.0ch01	76990256 76990277 +	22	176.0878	5.805622	2.49E-16
SL3.0ch01	76990266 76990287 +	22	47.36513	5.158959	5.92E-06
SL3.0ch01	76990615 76990636 +	22	13.85073	6.912013	0.004316
SL3.0ch01	76990616 76990637 +	22	57.79537	7.523831	0.000253
SL3.0ch01	76990752 76990773 +	22	28.3749	4.876359	0.000519
SL3.0ch01	76990782 76990803 +	22	55.5889	5.901959	1.85E-06
SL3.0ch01	76990839 76990860 -	22	26.23609	7.829429	0.000276
SL3.0ch01	77035220 77035241 -	22	19.4936	4.882062	0.009042
SL3.0ch01	78000183 78000204 +	22	12.37212	6.740927	0.007639
SL3.0ch01	78000210 78000231 +	22	14.40413	6.968615	0.003742
SL3.0ch01	80937363 80937385 +	23	138.1722	2.370948	0.000156
SL3.0ch01	82335750 82335773 -	24	40.75716	2.768031	0.001791
SL3.0ch01	82335766 82335789 -	24	30.69826	2.793231	0.005941
SL3.0ch01	86876366 86876389 -	24	31.93292	4.037721	0.000219
SL3.0ch01	86876372 86876395 +	24	31.2132	4.225477	0.00045
SL3.0ch01	86876374 86876397 +	24	25.06635	4.237581	0.002085
SL3.0ch01	86876378 86876399 +	22	25.13687	7.765773	0.000569
SL3.0ch01	88513037 88513060 +	24	11.72395	6.676453	0.009461
SL3.0ch01	89446168 89446191 -	24	74.26148	3.041738	3.13E-05
SL3.0ch01	89446168 89446190 -	23	39.58614	3.612623	0.000209
SL3.0ch01	89446170 89446192 -	23	35.81443	2.955464	0.004925
SL3.0ch01	90630245 90630268 -	24	59.54972	2.345784	0.004985
SL3.0ch01	90970021 90970044 +	24	36.15243	6.870016	0.001247
SL3.0ch01	90970023 90970046 +	24	24.75719	6.321235	0.00563
SL3.0ch01	91152453 91152475 +	23	45.50484	2.430146	0.004161
SL3.0ch01	92531954 92531976 +	23	32.71796	4.676414	0.000242
SL3.0ch01	92531968 92531990 +	23	54.11317	3.139869	0.000358
SL3.0ch01	92591144 92591167 -	24	227.4541	2.088164	0.00869
SL3.0ch01	92591152 92591175 -	24	152.0542	1.77095	0.009001
SL3.0ch01	93151388 93151409 -	22	73.14924	5.551882	4.91E-09
SL3.0ch01	93212394 93212417 -	24	13.0494	6.832503	0.006593
SL3.0ch01	93461626 93461649 +	24	12.46699	6.755593	0.006437

SL3.0ch01	93461627	93461650	+	24	31.36827	8.090317	8.99E-05
SL3.0ch01	93461646	93461668	+	23	13.33381	6.845817	0.0076
SL3.0ch01	93461648	93461671	+	24	24.38548	7.729294	0.000318
SL3.0ch01	94546313	94546336	-	24	43.34586	2.560669	0.005875
SL3.0ch01	94692078	94692101	+	24	79.18496	6.996702	5.53E-07
SL3.0ch01	94692081	94692104	+	24	12.36936	6.748403	0.007746
SL3.0ch01	95158841	95158862	+	22	32.76963	5.12757	0.000212
SL3.0ch01	95328642	95328665	+	24	13.87606	6.917577	0.004182
SL3.0ch01	95719887	95719910	-	24	73.89605	4.061397	9.99E-08
SL3.0ch01	96120880	96120902	+	23	20.58065	3.710521	0.009623
SL3.0ch01	96181570	96181591	-	22	136.6086	2.115855	0.005534
SL3.0ch01	97362347	97362371	-	25	19.27823	4.303805	0.008403
SL3.0ch01	97362348	97362371	-	24	142.9938	4.971185	1.74E-14
SL3.0ch01	97362351	97362374	-	24	38.17858	4.878821	4.67E-05
SL3.0ch01	97362353	97362376	-	24	18.98235	4.963195	0.008475
SL3.0ch01	97362355	97362376	-	22	23.16933	4.209372	0.002101
SL3.0ch02	1297519	1297540	+	22	55.4829	2.746081	0.000671
SL3.0ch02	1297807	1297828	+	22	46.44144	2.50257	0.0043
SL3.0ch02	1297808	1297829	+	22	45.46072	7.193456	0.000509
SL3.0ch02	1297809	1297828	+	20	28.26172	3.770493	0.002224
SL3.0ch02	1297809	1297830	+	22	48.46462	5.701471	5.84E-06
SL3.0ch02	1297810	1297831	+	22	22.21741	6.127032	0.008824
SL3.0ch02	1298058	1298079	+	22	24.48284	6.268303	0.006292
SL3.0ch02	1298059	1298080	+	22	16.19367	7.129087	0.002688
SL3.0ch02	1298101	1298122	+	22	79.59945	3.739011	1.16E-05
SL3.0ch02	1298102	1298123	+	22	112.4044	2.212493	0.005666
SL3.0ch02	1298249	1298270	+	22	22.19911	5.079046	0.004316
SL3.0ch02	1298425	1298446	+	22	18.71295	4.354415	0.00983
SL3.0ch02	1299175	1299196	+	22	12.74469	6.786325	0.00606
SL3.0ch02	1299191	1299212	+	22	27.01689	4.285356	0.003575
SL3.0ch02	1299220	1299241	+	22	28.04408	5.522451	0.001005
SL3.0ch02	1299239	1299260	+	22	59.06933	5.519551	4.43E-07
SL3.0ch02	1299440	1299461	+	22	101.024	5.996928	1.41E-10
SL3.0ch02	1299641	1299662	+	22	18.90449	7.361477	0.001117
SL3.0ch02	1299747	1299768	+	22	13.63128	6.887403	0.004458
SL3.0ch02	1299932	1299953	+	22	22.71848	5.16645	0.003524
SL3.0ch02	1299936	1299957	+	22	23.52833	4.146778	0.002386
SL3.0ch02	1300045	1300067	+	23	22.72348	3.594975	0.004964
SL3.0ch02	1300403	1300424	+	22	18.42741	7.319738	0.001275
SL3.0ch02	1303812	1303833	+	22	23.85337	4.660786	0.001735
SL3.0ch02	1304215	1304236	+	22	33.17507	8.167229	8.79E-05
SL3.0ch02	1304425	1304446	+	22	36.20384	4.868714	3.63E-05
SL3.0ch02	1304485	1304506	+	22	11.86855	6.679601	0.009277
SL3.0ch02	1304488	1304509	+	22	14.89079	7.013031	0.003062
SL3.0ch02	1304495	1304517	+	23	33.30761	5.772024	0.000368
SL3.0ch02	1304496	1304517	+	22	48.79113	7.278078	0.00031
SL3.0ch02	1304626	1304647	+	22	54.41274	5.464657	4.01E-06
SL3.0ch02	1305002	1305023	+	22	14.32449	6.952513	0.004233
SL3.0ch02	1305005	1305026	+	22	30.98525	3.612423	0.00061

SL3.0ch02	1305099	1305120 +	22	22.8614	5.118124	0.004311
SL3.0ch02	1305110	1305131 +	22	173.2643	4.064353	2.87E-10
SL3.0ch02	1305684	1305705 +	22	48.86537	6.260387	1.87E-05
SL3.0ch02	1306193	1306214 +	22	30.06522	8.024886	0.000268
SL3.0ch02	4568233	4568254 +	22	68.42379	3.439123	2.56E-05
SL3.0ch02	4568809	4568830 +	22	84.97137	6.111555	2.59E-09
SL3.0ch02	4568934	4568955 +	22	28.78999	5.560706	0.000864
SL3.0ch02	4568936	4568957 +	22	40.47717	3.957454	4.26E-05
SL3.0ch02	4568937	4568958 +	22	73.62889	3.500735	9.42E-07
SL3.0ch02	4568939	4568960 +	22	95.73756	4.139923	2.5E-09
SL3.0ch02	4568941	4568962 +	22	52.78739	3.933062	2.29E-06
SL3.0ch02	4569196	4569217 +	22	24.0526	4.261167	0.002485
SL3.0ch02	4569197	4569218 +	22	49.47839	2.810152	0.001424
SL3.0ch02	4569219	4569240 +	22	27.50226	2.993913	0.008161
SL3.0ch02	4569503	4569524 +	22	119.7727	3.443588	3.86E-05
SL3.0ch02	4569583	4569604 +	22	43.39206	5.093644	3.04E-05
SL3.0ch02	4569587	4569608 +	22	513.6222	3.085329	5.46E-06
SL3.0ch02	4569588	4569609 +	22	426.9528	5.748368	1.75E-18
SL3.0ch02	4569658	4569679 +	22	44.83237	2.62889	0.009445
SL3.0ch02	4569675	4569696 +	22	25.65421	5.303437	0.001586
SL3.0ch02	4569886	4569907 +	22	13.77553	6.898161	0.004703
SL3.0ch02	4572983	4573004 +	22	14.89481	7.013322	0.00356
SL3.0ch02	4572984	4573005 +	22	27.25592	4.374248	0.00065
SL3.0ch02	4573114	4573135 +	22	23.78997	4.555235	0.003102
SL3.0ch02	4573121	4573142 +	22	26.80596	7.859669	0.000262
SL3.0ch02	4573277	4573298 +	22	38.04628	3.124287	0.001336
SL3.0ch02	4573447	4573468 +	22	69.64097	3.157665	9.53E-06
SL3.0ch02	4573513	4573534 +	22	65.4391	3.321963	1.21E-05
SL3.0ch02	4573604	4573625 +	22	20.45326	7.466986	0.001165
SL3.0ch02	4573617	4573638 +	22	25.75804	4.677102	0.001785
SL3.0ch02	4573790	4573811 +	22	325.3094	4.187465	6.09E-13
SL3.0ch02	4573806	4573827 +	22	52.3034	3.027469	0.000183
SL3.0ch02	4573868	4573889 +	22	28.08691	3.397479	0.003104
SL3.0ch02	4573911	4573932 +	22	55.99732	4.381358	5.26E-06
SL3.0ch02	4574112	4574133 +	22	84.00746	4.837388	1.81E-09
SL3.0ch02	4574112	4574131 +	20	18.03114	7.288523	0.001377
SL3.0ch02	4574113	4574134 +	22	827.1604	1.915529	0.001839
SL3.0ch02	4574115	4574136 +	22	67.68812	5.154909	1.59E-08
SL3.0ch02	4574116	4574137 +	22	39.60786	3.326482	0.000393
SL3.0ch02	4574117	4574138 +	22	80.66033	3.717039	2.32E-07
SL3.0ch02	4574120	4574141 +	22	210.1664	3.400108	1.87E-07
SL3.0ch02	4574533	4574555 +	23	11.36386	6.631214	0.009035
SL3.0ch02	4574538	4574560 +	23	86.56641	2.864478	2.87E-05
SL3.0ch02	4574651	4574672 +	22	43.62586	3.964556	0.000265
SL3.0ch02	4574652	4574673 +	22	61.25485	5.603582	3.34E-07
SL3.0ch02	4574689	4574710 +	22	16.22948	7.137194	0.002237
SL3.0ch02	5895616	5895637 +	22	35.28818	5.807076	0.001637
SL3.0ch02	19532973	19532994 -	22	52.61679	6.401873	1.74E-05
SL3.0ch02	19537713	19537734 -	22	20.58196	7.482065	0.000752

SL3.0ch02	22256560	22256583	+	24	71.83179	2.596661	0.002898
SL3.0ch02	23452226	23452247	+	22	28.36248	7.942054	0.000174
SL3.0ch02	23452722	23452743	+	22	33.82132	5.7965	0.000283
SL3.0ch02	23452730	23452751	+	22	351.3103	6.509858	1.91E-20
SL3.0ch02	23452735	23452756	-	22	38.2601	8.372339	5.27E-05
SL3.0ch02	23452804	23452825	+	22	23.96159	4.715961	0.002524
SL3.0ch02	23453086	23453107	+	22	22.91599	5.230767	0.003103
SL3.0ch02	23453086	23453107	-	22	11.36742	6.621395	0.009569
SL3.0ch02	23453088	23453109	-	22	12.1893	6.724328	0.007149
SL3.0ch02	23453089	23453110	-	22	27.2492	6.45312	0.004182
SL3.0ch02	23453091	23453112	-	22	61.37645	7.629227	9.62E-05
SL3.0ch02	23453092	23453113	-	22	44.40691	5.198776	5.9E-06
SL3.0ch02	23453093	23453114	-	22	18.30405	7.313285	0.001235
SL3.0ch02	23453094	23453115	-	22	11.36742	6.621395	0.009569
SL3.0ch02	23453616	23453637	+	22	13.56335	6.878001	0.004985
SL3.0ch02	23453774	23453795	-	22	25.58293	5.391103	0.001822
SL3.0ch02	23453774	23453795	+	22	132.6049	7.769284	7.78E-09
SL3.0ch02	23453775	23453796	+	22	27.15677	6.448212	0.003993
SL3.0ch02	23453779	23453800	-	22	66.34477	5.407898	8.51E-08
SL3.0ch02	23453785	23453806	-	22	50.42098	7.34541	0.00025
SL3.0ch02	23453787	23453808	-	22	13.90978	6.914861	0.004414
SL3.0ch02	23453791	23453812	-	22	52.15658	8.820697	1.31E-05
SL3.0ch02	23453792	23453812	-	21	48.49503	2.935208	0.008662
SL3.0ch02	23453792	23453813	-	22	39.77652	8.430513	3.22E-05
SL3.0ch02	23453798	23453819	-	22	381.4004	6.615262	1.26E-05
SL3.0ch02	23453799	23453820	-	22	180.2819	5.417194	1.14E-13
SL3.0ch02	23453800	23453821	-	22	16.66834	7.175212	0.002207
SL3.0ch02	23454072	23454093	+	22	41.24186	3.523692	0.000616
SL3.0ch02	23454087	23454108	+	22	73.10528	6.301347	7.27E-08
SL3.0ch02	23454130	23454151	+	22	16.97539	7.202314	0.001765
SL3.0ch02	23454418	23454439	-	22	12.2428	6.738515	0.007397
SL3.0ch02	23454420	23454441	-	22	29.47852	5.599761	0.000698
SL3.0ch02	23454421	23454442	-	22	144.9743	6.33915	1.34E-13
SL3.0ch02	23454422	23454443	-	22	19.93135	7.439993	0.000831
SL3.0ch02	23454423	23454444	-	22	37.93253	5.380945	4.54E-05
SL3.0ch02	23454799	23454820	-	22	36.65988	6.884518	0.001094
SL3.0ch02	23454800	23454821	-	22	16.3448	7.144765	0.002381
SL3.0ch02	23455188	23455209	-	22	86.1421	3.495441	8.58E-05
SL3.0ch02	23455202	23455223	-	22	104.1152	7.419449	6.53E-08
SL3.0ch02	23455207	23455228	+	22	13.40097	6.857801	0.005093
SL3.0ch02	23455508	23455529	-	22	171.9936	9.119425	6.56E-07
SL3.0ch02	23455509	23455530	+	22	22.36676	3.878633	0.005959
SL3.0ch02	23455510	23455531	-	22	121.1975	6.055926	2.6E-12
SL3.0ch02	23455510	23455531	+	22	12.85847	6.805893	0.005413
SL3.0ch02	23455687	23455708	-	22	15.21032	7.046625	0.002796
SL3.0ch02	23455691	23455712	-	22	84.57816	5.568968	1.24E-08
SL3.0ch02	23455759	23455780	+	22	21.46687	7.539365	0.000662
SL3.0ch02	23455763	23455784	-	22	30.85298	6.6344	0.002313
SL3.0ch02	23455763	23455784	+	22	25.70883	7.800821	0.000298

SL3.0ch02	23455765	23455785	+	21	48.80575	4.698951	1.18E-05
SL3.0ch02	23455771	23455792	-	22	29.78469	5.610524	0.000641
SL3.0ch02	23455772	23455793	-	22	93.77987	7.268112	1.44E-07
SL3.0ch02	23456235	23456256	-	22	40.96358	5.495324	3.3E-05
SL3.0ch02	23456237	23456258	-	22	108.6682	5.297157	0.003425
SL3.0ch02	23456238	23456259	-	22	33.64253	6.761783	0.001572
SL3.0ch02	23456240	23456261	-	22	46.12032	7.215603	0.000391
SL3.0ch02	23456241	23456262	-	22	16.56466	7.167699	0.00203
SL3.0ch02	23456242	23456263	-	22	66.33527	7.740826	7.41E-05
SL3.0ch02	23456252	23456273	-	22	40.09605	4.479279	6.33E-05
SL3.0ch02	23456254	23456275	-	22	26.96539	6.436428	0.005618
SL3.0ch02	23456586	23456607	-	22	22.89799	7.631986	0.000514
SL3.0ch02	23456595	23456616	+	22	53.64804	5.891545	5.89E-06
SL3.0ch02	23456596	23456617	+	22	52.8607	5.465671	5.84E-06
SL3.0ch02	23456597	23456618	+	22	14.37601	6.965946	0.00445
SL3.0ch02	23456802	23456823	-	22	108.5985	6.49624	2.61E-10
SL3.0ch02	23456803	23456824	-	22	148.7181	5.953624	2.28E-13
SL3.0ch02	23456803	23456823	-	21	17.74901	7.264888	0.001734
SL3.0ch02	23456805	23456825	-	21	30.85903	3.647665	0.004707
SL3.0ch02	23456805	23456826	-	22	118.4186	7.034995	2.59E-09
SL3.0ch02	23456808	23456829	-	22	46.2506	8.649901	1.23E-05
SL3.0ch02	23456863	23456884	-	22	20.82308	7.496995	0.000733
SL3.0ch02	23456973	23456994	-	22	120.8416	6.623119	1.69E-11
SL3.0ch02	23457116	23457137	+	22	479.4883	7.346076	1.24E-22
SL3.0ch02	23457206	23457227	-	22	12.10935	6.71872	0.009157
SL3.0ch02	23457210	23457231	-	22	27.75639	5.511784	0.001117
SL3.0ch02	23457211	23457232	-	22	26.57306	4.45222	0.000843
SL3.0ch02	23457212	23457233	-	22	66.40725	7.742907	7.25E-05
SL3.0ch02	23457213	23457234	-	22	69.87505	5.854885	2.75E-08
SL3.0ch02	23457315	23457336	-	22	12.58276	6.773252	0.005875
SL3.0ch02	23457412	23457433	+	22	26.89524	7.867961	0.000201
SL3.0ch02	23457413	23457434	+	22	20.76051	3.775004	0.009021
SL3.0ch02	23457414	23457435	+	22	11.44059	6.636238	0.008626
SL3.0ch02	23457416	23457437	+	22	33.84393	4.813196	0.000342
SL3.0ch02	23457417	23457438	+	22	99.95132	7.362714	1.24E-07
SL3.0ch02	23457418	23457439	+	22	49.94063	6.360556	2.85E-05
SL3.0ch02	23457418	23457437	+	20	13.67346	6.88854	0.00563
SL3.0ch02	23457478	23457499	-	22	21.7993	7.566077	0.000534
SL3.0ch02	23457481	23457502	-	22	316.7752	6.390647	0.000677
SL3.0ch02	23457482	23457503	-	22	29.52515	6.57244	0.002866
SL3.0ch02	23457487	23457508	-	22	19.81069	7.422576	0.000988
SL3.0ch02	23457490	23457511	-	22	25.02942	5.361928	0.003564
SL3.0ch02	23457513	23457534	-	22	102.7764	5.368676	5.26E-11
SL3.0ch02	23457569	23457590	-	22	25.41539	6.352652	0.005424
SL3.0ch02	23457570	23457591	-	22	49.05894	7.30515	0.000296
SL3.0ch02	23457587	23457608	-	22	23.04754	6.216621	0.008161
SL3.0ch02	23457600	23457621	-	22	72.27045	7.865453	4.33E-05
SL3.0ch02	23457602	23457621	-	20	22.64827	4.636383	0.003331
SL3.0ch02	23457607	23457627	-	21	124.818	3.798823	1.64E-08

SL3.0ch02	23457608	23457628	-	21	22.41847	5.210448	0.006702
SL3.0ch02	23457609	23457630	-	22	119.2786	7.615609	1.72E-08
SL3.0ch02	23457610	23457631	-	22	45.93505	7.209736	0.000401
SL3.0ch02	23457611	23457632	-	22	39.38082	8.421416	2.9E-05
SL3.0ch02	23457612	23457633	-	22	42.84489	6.136289	5.62E-05
SL3.0ch02	23457613	23457634	-	22	106.1826	8.4213	5.76E-06
SL3.0ch02	23457614	23457635	-	22	46.65125	7.233054	0.000357
SL3.0ch02	23457615	23457636	-	22	49.83258	6.355494	1.88E-05
SL3.0ch02	23457616	23457635	-	20	22.31872	4.610278	0.002716
SL3.0ch02	23457616	23457637	-	22	56.94478	7.520466	0.000148
SL3.0ch02	23457618	23457639	-	22	14.72764	6.999226	0.003103
SL3.0ch02	23457840	23457861	+	22	41.4446	5.09849	1.13E-05
SL3.0ch02	23457842	23457863	+	22	53.47074	5.467705	6.55E-07
SL3.0ch02	23457844	23457865	+	22	23.30363	7.66505	0.000635
SL3.0ch02	23457845	23457866	+	22	32.5895	6.714321	0.002528
SL3.0ch02	23457846	23457867	+	22	53.48106	8.860653	9.17E-06
SL3.0ch02	23457847	23457868	+	22	19.53701	7.403489	0.001325
SL3.0ch02	23457848	23457869	+	22	49.40301	7.319033	0.000495
SL3.0ch02	23457850	23457870	+	21	16.76199	7.184367	0.002428
SL3.0ch02	23457850	23457871	+	22	16.89101	7.196063	0.002566
SL3.0ch02	23457853	23457874	+	22	50.5486	4.254337	8.64E-05
SL3.0ch02	23457861	23457882	+	22	26.83047	6.432219	0.003993
SL3.0ch02	23458117	23458138	-	22	13.83382	6.905504	0.004293
SL3.0ch02	23458138	23458159	-	22	48.54482	5.739497	5.93E-06
SL3.0ch02	23458139	23458160	-	22	67.25242	6.788124	2.17E-06
SL3.0ch02	23458140	23458161	-	22	13.21213	6.845173	0.004985
SL3.0ch02	23458246	23458267	-	22	11.87222	6.688592	0.007434
SL3.0ch02	23458547	23458568	-	22	59.5588	5.048588	1.34E-07
SL3.0ch02	23458550	23458570	-	21	198.1316	3.451989	2.91E-05
SL3.0ch02	23458550	23458571	-	22	99.5556	3.658367	1.23E-05
SL3.0ch02	23458555	23458576	-	22	20.85243	7.500344	0.000675
SL3.0ch02	23458557	23458578	-	22	11.09416	6.591319	0.009712
SL3.0ch02	23458566	23458587	-	22	28.09721	4.861784	0.000586
SL3.0ch02	23458574	23458595	-	22	12.04383	6.709415	0.007149
SL3.0ch02	23458576	23458597	+	22	19.88753	7.435585	0.000827
SL3.0ch02	23458933	23458954	-	22	63.25534	4.921879	1.37E-07
SL3.0ch02	23458935	23458956	-	22	11.17334	6.603696	0.009476
SL3.0ch02	23458938	23458959	-	22	59.7565	4.198779	3.68E-06
SL3.0ch02	23458940	23458961	-	22	13.27318	6.845729	0.005055
SL3.0ch02	23459032	23459053	+	22	13.92467	6.91915	0.003929
SL3.0ch02	23459033	23459054	+	22	31.17888	5.678083	0.000474
SL3.0ch02	23459034	23459055	+	22	23.19893	5.248729	0.002842
SL3.0ch02	23459038	23459059	+	22	180.1949	6.92189	3.85E-13
SL3.0ch02	23459040	23459061	+	22	77.53691	6.387665	6.57E-07
SL3.0ch02	23459056	23459077	-	22	12.65506	6.774608	0.006658
SL3.0ch02	23459079	23459100	+	22	18.70189	7.340437	0.001289
SL3.0ch02	23459092	23459111	-	20	45.52523	4.09404	0.000191
SL3.0ch02	23459100	23459121	-	22	18.80181	4.364799	0.008893
SL3.0ch02	23459101	23459122	-	22	34.80816	5.796074	0.000317

SL3.0ch02	23459102	23459123	-	22	16.41679	7.155779	0.002593
SL3.0ch02	23459106	23459127	-	22	39.5649	5.98283	0.000142
SL3.0ch02	23459108	23459129	+	22	42.43664	8.524583	2.1E-05
SL3.0ch02	23459113	23459134	+	22	12.93765	6.81649	0.005275
SL3.0ch02	23459151	23459172	+	22	28.22822	6.50487	0.003503
SL3.0ch02	23459272	23459293	-	22	35.83834	8.278094	8.37E-05
SL3.0ch02	23459273	23459294	-	22	12.91752	6.808665	0.005433
SL3.0ch02	23459276	23459297	+	22	22.52181	6.178149	0.007816
SL3.0ch02	23459277	23459298	-	22	30.22834	5.631679	0.000687
SL3.0ch02	23459359	23459380	-	22	64.24006	5.133616	1.73E-07
SL3.0ch02	23459362	23459383	+	22	15.05639	7.03168	0.002827
SL3.0ch02	23459363	23459384	+	22	20.56367	4.495469	0.005975
SL3.0ch02	23459365	23459386	-	22	42.47802	8.525443	2.21E-05
SL3.0ch02	23459366	23459387	-	22	13.35236	6.855945	0.004829
SL3.0ch02	23459372	23459393	+	22	21.48558	4.145962	0.004687
SL3.0ch02	23459374	23459395	-	22	43.6477	5.584657	1.88E-05
SL3.0ch02	23459380	23459401	+	22	47.27247	6.278764	3.37E-05
SL3.0ch02	23459442	23459463	+	22	11.26699	6.617159	0.009228
SL3.0ch02	23459448	23459469	-	22	23.93347	4.717411	0.003043
SL3.0ch02	23459456	23459477	+	22	12.10889	6.710446	0.008472
SL3.0ch02	23459462	23459483	-	22	405.8736	5.436489	1.94E-19
SL3.0ch02	23459470	23459491	-	22	133.7348	5.981441	1.79E-13
SL3.0ch02	23459475	23459496	-	22	52.96003	5.866016	2.43E-06
SL3.0ch02	23459476	23459497	-	22	24.41055	4.740455	0.001469
SL3.0ch02	23459482	23459503	-	22	44.32981	5.609224	1.53E-05
SL3.0ch02	23459483	23459504	-	22	62.47799	6.108917	8.3E-07
SL3.0ch02	23459485	23459506	+	22	13.15986	6.834761	0.005061
SL3.0ch02	23459485	23459506	-	22	41.21697	8.484236	2.34E-05
SL3.0ch02	23459510	23459531	+	22	13.01439	6.820964	0.005126
SL3.0ch02	23459514	23459535	-	22	38.43946	6.953456	0.000926
SL3.0ch02	23459528	23459549	-	22	24.96236	5.357718	0.002935
SL3.0ch02	23459529	23459550	-	22	24.64651	5.337109	0.002476
SL3.0ch02	23459536	23459557	-	22	359.3848	5.826844	3.16E-16
SL3.0ch02	23459538	23459559	-	22	73.53536	5.932022	3.28E-08
SL3.0ch02	23459542	23459563	-	22	19.49284	7.40325	0.000942
SL3.0ch02	23459544	23459565	-	22	21.50458	5.140129	0.004184
SL3.0ch02	23459546	23459567	-	22	28.67722	7.961099	0.000144
SL3.0ch02	23459565	23459586	+	22	18.71066	4.940376	0.008725
SL3.0ch02	23459581	23459600	+	20	56.72751	5.96791	3.07E-06
SL3.0ch02	23459614	23459635	-	22	13.44035	6.861728	0.005749
SL3.0ch02	23459619	23459640	-	22	77.17079	6.956055	7.34E-07
SL3.0ch02	23459625	23459646	-	22	15.09455	7.032415	0.003213
SL3.0ch02	23459722	23459743	+	22	78.10079	6.017827	1.32E-08
SL3.0ch02	23459752	23459773	+	22	16.47182	7.158067	0.002095
SL3.0ch02	23459760	23459781	+	22	26.5038	4.410334	0.001351
SL3.0ch02	23459848	23459869	+	22	33.83013	5.796074	0.000314
SL3.0ch02	23459849	23459870	+	22	65.19125	5.443929	1.44E-07
SL3.0ch02	23459850	23459871	+	22	63.08963	7.668703	9.96E-05
SL3.0ch02	23459879	23459900	-	22	24.45697	7.730773	0.00033

SL3.0ch02	23459891	23459912	-	22	16.26963	7.13678	0.002598
SL3.0ch02	23459901	23459922	-	22	21.32343	7.531836	0.000694
SL3.0ch02	23459902	23459923	-	22	42.91178	8.543445	1.98E-05
SL3.0ch02	23459965	23459986	-	22	26.75379	7.861015	0.000205
SL3.0ch02	23459966	23459987	-	22	61.07388	3.767566	4.17E-05
SL3.0ch02	23459967	23459988	-	22	85.67809	6.155156	6.86E-09
SL3.0ch02	23459968	23459989	-	22	25.69232	6.370196	0.005289
SL3.0ch02	23459970	23459990	-	21	97.61844	2.74437	0.009569
SL3.0ch02	23459990	23460011	+	22	12.00001	6.701769	0.007395
SL3.0ch02	23459991	23460011	-	21	28.75931	4.567667	0.0005
SL3.0ch02	23459992	23460013	+	22	28.51758	6.519699	0.003151
SL3.0ch02	23459993	23460014	+	22	121.1916	6.656218	8.69E-11
SL3.0ch02	23459994	23460015	+	22	38.95216	3.85852	0.000336
SL3.0ch02	23459996	23460015	+	20	19.00873	4.910397	0.008126
SL3.0ch02	23459997	23460018	+	22	20.16461	4.464126	0.004985
SL3.0ch02	23460021	23460042	+	22	31.3139	5.684187	0.000487
SL3.0ch02	23460022	23460043	+	22	17.26399	7.231665	0.001572
SL3.0ch02	23460036	23460057	-	22	80.9748	4.757268	4.93E-08
SL3.0ch02	23460050	23460070	-	21	69.55591	3.395963	1.91E-05
SL3.0ch02	23460103	23460124	+	22	13.43556	6.866077	0.004797
SL3.0ch02	23460119	23460140	+	22	20.07224	5.041006	0.006382
SL3.0ch02	23460119	23460140	-	22	31.38544	6.657975	0.002212
SL3.0ch02	23460120	23460141	+	22	22.32845	5.194236	0.003444
SL3.0ch02	23460185	23460206	-	22	11.31881	6.619554	0.009016
SL3.0ch02	23460188	23460209	-	22	23.76339	4.658318	0.001503
SL3.0ch02	23460211	23460232	-	22	17.77235	7.27011	0.001397
SL3.0ch02	23460218	23460239	-	22	395.2192	6.786561	1.6E-23
SL3.0ch02	23460224	23460245	-	22	32.07728	4.729165	0.000268
SL3.0ch02	23460233	23460254	-	22	13.21045	6.835039	0.006036
SL3.0ch02	23460238	23460259	-	22	20.25143	5.051287	0.00716
SL3.0ch02	23460282	23460303	+	22	14.57815	6.986971	0.003612
SL3.0ch02	23460295	23460316	+	22	17.9086	7.281536	0.001421
SL3.0ch02	23460316	23460337	-	22	13.67066	6.890586	0.0043
SL3.0ch02	23460317	23460338	-	22	16.77565	7.185283	0.001877
SL3.0ch02	23460347	23460368	-	22	25.13607	5.36776	0.001907
SL3.0ch02	23460351	23460372	-	22	22.0293	4.17924	0.003832
SL3.0ch02	23460358	23460379	-	22	20.05481	4.042595	0.008297
SL3.0ch02	23460371	23460392	-	22	20.52618	3.753746	0.008875
SL3.0ch02	23460414	23460435	+	22	23.96257	6.267611	0.006213
SL3.0ch02	23460498	23460519	-	22	238.2265	5.172859	3.35E-14
SL3.0ch02	23460584	23460605	+	22	12.50236	6.759252	0.006392
SL3.0ch02	23460585	23460605	+	21	56.49146	2.883737	0.004336
SL3.0ch02	23565962	23565985	+	24	36.92315	2.812612	0.004825
SL3.0ch02	26378028	26378049	-	22	19.50731	7.404144	0.001034
SL3.0ch02	26378699	26378720	-	22	27.66375	5.510809	0.002864
SL3.0ch02	26378700	26378721	-	22	43.57994	3.364524	0.001102
SL3.0ch02	29078052	29078073	-	22	13.30935	6.849477	0.006775
SL3.0ch02	29905778	29905800	+	23	120.3944	3.521057	6.6E-08
SL3.0ch02	29905779	29905800	+	22	133.853	3.786891	3.29E-06

SL3.0ch02	29905970	29905991	+	22	38.14004	5.8789	0.000262
SL3.0ch02	29905971	29905992	+	22	159.495	5.526716	3.16E-12
SL3.0ch02	29905972	29905993	+	22	32.59244	3.978464	0.001596
SL3.0ch02	29908956	29908977	+	22	106.3128	3.387979	8.78E-05
SL3.0ch02	30960483	30960504	+	22	15.97712	7.117876	0.002275
SL3.0ch02	30960511	30960532	+	22	22.27509	7.593592	0.000567
SL3.0ch02	30960574	30960595	+	22	24.38623	3.628704	0.002833
SL3.0ch02	30960606	30960627	+	22	55.7308	4.015227	1.96E-06
SL3.0ch02	30960678	30960699	-	22	19.72672	7.418542	0.000916
SL3.0ch02	34855131	34855154	+	24	138.8898	1.852759	0.005317
SL3.0ch02	34902723	34902744	-	22	66.50424	5.336005	9.22E-07
SL3.0ch02	35675696	35675718	+	23	48.79611	5.274651	1.89E-06
SL3.0ch02	35675700	35675721	+	22	20.17913	5.046592	0.005975
SL3.0ch02	35675701	35675722	+	22	13.31057	6.851782	0.006307
SL3.0ch02	35675704	35675725	+	22	26.75468	3.324564	0.004544
SL3.0ch02	35676629	35676650	+	22	25.3067	3.424365	0.005736
SL3.0ch02	35676686	35676707	+	22	47.29658	3.794598	8.78E-05
SL3.0ch02	35676838	35676859	+	22	23.96828	7.702632	0.000395
SL3.0ch02	35677003	35677024	+	22	34.59148	8.233811	5.39E-05
SL3.0ch02	35677172	35677193	+	22	24.61874	6.281646	0.005533
SL3.0ch02	35677398	35677419	+	22	50.9312	5.333271	2.43E-06
SL3.0ch02	35677543	35677564	+	22	23.04133	5.237659	0.003559
SL3.0ch02	35677544	35677565	+	22	23.1519	5.246152	0.003154
SL3.0ch02	36947961	36947984	-	24	29.17976	6.528319	0.003043
SL3.0ch02	37369918	37369941	+	24	53.54132	3.06719	7.53E-05
SL3.0ch02	39902379	39902402	+	24	966.5863	1.615609	0.006777
SL3.0ch02	42387111	42387134	-	24	368.0901	5.231233	2.59E-17
SL3.0ch02	42387114	42387135	-	22	127.6951	5.524416	1.34E-11
SL3.0ch02	42387114	42387137	-	24	77.23992	5.634945	1.79E-08
SL3.0ch02	42387130	42387153	+	24	91.34943	5.434694	2.81E-09
SL3.0ch02	43111798	43111821	+	24	27.12641	20.69668	0.000953
SL3.0ch02	43111810	43111833	+	24	39.6883	21.22418	0.000586
SL3.0ch02	46141805	46141828	-	24	93.3882	2.284708	0.001709
SL3.0ch02	46601471	46601494	-	24	25.83775	6.356797	0.004926
SL3.0ch02	46601484	46601507	+	24	13.41187	6.866712	0.004606
SL3.0ch02	46601489	46601512	-	24	28.56359	7.960346	0.000177
SL3.0ch02	47191204	47191227	-	24	22.91837	5.239472	0.006036
SL3.0ch02	47191205	47191228	-	24	109.3374	3.794706	3.35E-05
SL3.0ch02	47251837	47251858	+	22	19.0284	4.910401	0.007478
SL3.0ch02	48129124	48129145	+	22	24.8649	7.755684	0.000301
SL3.0ch02	50317652	50317675	+	24	506.9322	2.067303	0.000773
SL3.0ch02	50367906	50367929	-	24	106.9822	2.984085	0.000497
SL3.0ch02	50913195	50913218	-	24	87.55827	2.762337	0.007705
SL3.0ch02	52306728	52306749	+	22	43.49559	5.543338	3.56E-05
SL3.0ch02	52306732	52306753	+	22	13.30253	6.851524	0.005038
SL3.0ch02	53287840	53287861	-	22	27.79296	3.820889	0.001765
SL3.0ch02	53289250	53289271	-	22	32.89044	6.704097	0.001925
SL3.0ch02	53289829	53289850	-	22	15.21633	7.044791	0.003033
SL3.0ch02	53300010	53300033	-	24	46.10607	4.836605	4.98E-05

SL3.0ch02	53300012	53300033	-	22	29.58975	4.890768	0.000705
SL3.0ch02	53300012	53300035	-	24	13.49346	6.877458	0.006837
SL3.0ch02	53300014	53300037	-	24	25.10729	5.253516	0.004824
SL3.0ch02	53300034	53300057	-	24	24.66844	7.748328	0.000661
SL3.0ch02	53300035	53300057	-	23	17.49993	7.253614	0.003598
SL3.0ch02	53300038	53300061	-	24	14.91333	7.020434	0.004818
SL3.0ch02	53300039	53300062	+	24	27.50037	4.42079	0.004559
SL3.0ch02	53300039	53300062	-	24	16.73833	7.188394	0.004754
SL3.0ch02	53300040	53300061	+	22	46.37765	6.213004	9.96E-05
SL3.0ch02	53300040	53300062	+	23	36.81867	8.32215	1E-04
SL3.0ch02	53737204	53737227	+	24	1213.854	1.819923	0.000353
SL3.0ch02	53737205	53737227	+	23	62.91692	2.254851	0.003728
SL3.0ch02	54345650	54345673	-	24	19.29798	20.22694	0.001441
SL3.0ch02	55017475	55017498	-	24	13.78598	6.8996	0.005042
SL3.0ch02	55017477	55017500	-	24	215.0687	8.466151	5.91E-11
SL3.0ch02	55017477	55017500	+	24	421.0188	9.413845	4.43E-14
SL3.0ch02	55017478	55017500	+	23	21.03927	7.510368	0.000719
SL3.0ch02	55017479	55017502	-	24	15.861	7.110965	0.002646
SL3.0ch02	55017480	55017503	-	24	20.08727	7.449921	0.000791
SL3.0ch02	55017480	55017503	+	24	124.271	7.621383	1.02E-08
SL3.0ch02	55017481	55017503	+	23	343.7025	7.750834	9.96E-19
SL3.0ch02	55017482	55017503	-	22	12.1596	6.727756	0.006791
SL3.0ch02	55017482	55017504	-	23	13.08312	6.830275	0.005041
SL3.0ch02	55017482	55017505	+	24	16.66789	7.17025	0.002514
SL3.0ch02	55242725	55242748	+	24	54.18117	3.068625	0.000169
SL3.0ch03	290177	290199	+	23	203.8948	1.753975	0.005418
SL3.0ch03	1058982	1059005	-	24	53.58059	2.655861	0.00955
SL3.0ch03	1407902	1407925	+	24	12.66638	6.787555	0.006512
SL3.0ch03	1773664	1773687	-	24	13.15584	6.835036	0.00548
SL3.0ch03	1773665	1773688	-	24	58.32242	6.514552	9.83E-06
SL3.0ch03	1946826	1946849	-	24	2608.212	1.649961	0.002867
SL3.0ch03	3370518	3370539	+	22	23.11786	7.64797	0.000435
SL3.0ch03	3370542	3370563	+	22	23.02695	4.561819	0.002645
SL3.0ch03	3779867	3779888	+	22	25.29932	5.280369	0.001806
SL3.0ch03	3779873	3779894	+	22	22.29399	7.595953	0.000532
SL3.0ch03	3779875	3779896	+	22	81.55401	2.702406	0.000503
SL3.0ch03	3779876	3779897	+	22	584.9243	5.813098	3E-25
SL3.0ch03	3779944	3779965	+	22	43.21613	6.115052	4.51E-05
SL3.0ch03	3779945	3779966	+	22	325.9075	5.349483	8.71E-22
SL3.0ch03	3779946	3779967	+	22	64.44882	2.6104	0.000687
SL3.0ch03	3779948	3779969	+	22	219.2165	5.301875	2.07E-19
SL3.0ch03	3779949	3779970	+	22	99.89793	4.974677	6.19E-12
SL3.0ch03	3780095	3780118	+	24	138.5981	3.269531	2.52E-09
SL3.0ch03	3781517	3781538	+	22	15.46544	7.06203	0.003364
SL3.0ch03	3781576	3781598	+	23	27.99785	4.81547	0.000655
SL3.0ch03	3781577	3781598	+	22	41.76685	5.40533	3.36E-05
SL3.0ch03	3781789	3781810	+	22	80.12963	3.521217	1.45E-05
SL3.0ch03	3781792	3781813	+	22	15.09298	7.037232	0.002789
SL3.0ch03	3781797	3781818	+	22	26.24369	6.399192	0.004316

SL3.0ch03	3781798	3781819	+	22	44.76491	5.179232	3.75E-06
SL3.0ch03	3781969	3781990	+	22	29.73672	4.091371	0.001614
SL3.0ch03	3782087	3782108	+	22	26.02749	4.750567	0.000828
SL3.0ch03	5110638	5110661	+	24	168.8976	2.625282	0.000442
SL3.0ch03	5110639	5110661	+	23	23.89065	3.376778	0.009754
SL3.0ch03	8624298	8624319	-	22	38.11671	3.223551	0.000586
SL3.0ch03	9143633	9143652	-	20	65.70128	3.645008	0.000193
SL3.0ch03	30078684	30078705	-	22	41.92251	5.082213	3.8E-05
SL3.0ch03	31677174	31677194	+	21	26.52301	3.375891	0.005229
SL3.0ch03	35365628	35365649	-	22	32.2132	3.385614	0.001229
SL3.0ch03	35725144	35725165	+	22	12.09121	6.708637	0.008683
SL3.0ch03	35725418	35725439	+	22	37.70562	8.354335	4.56E-05
SL3.0ch03	35725420	35725441	+	22	14.57896	6.986335	0.003322
SL3.0ch03	42165307	42165328	+	22	11.92128	6.699186	0.008741
SL3.0ch03	51031961	51031982	-	22	13.34792	6.852662	0.00518
SL3.0ch03	51648330	51648351	+	22	35.994	5.840484	0.000324
SL3.0ch03	51648882	51648903	+	22	32.92711	3.472288	0.002297
SL3.0ch03	51650103	51650124	+	22	35.05059	4.168066	0.000587
SL3.0ch03	52300200	52300221	-	22	15.13068	7.031588	0.003397
SL3.0ch03	54355859	54355882	-	24	96.61903	2.045614	0.005682
SL3.0ch03	54410976	54410997	+	22	52.32529	2.949111	0.000852
SL3.0ch03	56154945	56154966	+	22	12.44575	6.762587	0.006309
SL3.0ch03	56154953	56154974	+	22	59.20783	3.844949	7.16E-06
SL3.0ch03	56155010	56155031	+	22	121.3066	3.670418	1.06E-07
SL3.0ch03	56155462	56155483	+	22	25.46869	5.341443	0.0015
SL3.0ch03	56155777	56155798	+	22	39.95518	4.04119	0.000472
SL3.0ch03	58005892	58005915	+	24	282.6139	2.093321	0.000279
SL3.0ch03	58005894	58005917	+	24	256.7597	1.838168	0.003914
SL3.0ch03	58420184	58420205	+	22	58.95737	5.266031	5.18E-07
SL3.0ch03	63415017	63415040	+	24	42.31723	3.747048	0.000298
SL3.0ch03	63415019	63415040	+	22	53.52127	3.27537	1.82E-05
SL3.0ch03	63415019	63415041	+	23	56.68405	3.916357	1.03E-06
SL3.0ch03	65930124	65930147	+	24	54.04962	3.833067	0.001072
SL3.0ch03	67342934	67342957	-	24	41.22927	6.048701	7.9E-05
SL3.0ch03	67351885	67351908	-	24	43.77146	6.097069	4.86E-05
SL3.0ch03	68857650	68857671	+	22	25.44503	3.647829	0.004687
SL3.0ch03	68857848	68857869	+	22	19.65834	4.324742	0.009042
SL3.0ch03	68857853	68857874	+	22	20.68203	4.980365	0.00542
SL3.0ch03	68858734	68858755	+	22	114.7721	4.858695	3.14E-10
SL3.0ch03	68858737	68858758	+	22	47.32098	7.232024	0.000385
SL3.0ch03	68858740	68858761	+	22	30.73834	5.655911	0.000594
SL3.0ch03	68858827	68858848	+	22	43.68876	7.117267	0.000529
SL3.0ch03	68858829	68858850	+	22	23.03785	4.567467	0.002351
SL3.0ch03	68858910	68858930	+	21	22.08406	4.49227	0.004961
SL3.0ch03	68859012	68859033	+	22	86.4779	4.662978	1.03E-06
SL3.0ch03	68859016	68859035	+	20	1009.122	5.094157	2.58E-14
SL3.0ch03	68859016	68859037	+	22	21.4229	6.075657	0.0097
SL3.0ch03	68859087	68859108	+	22	62.56892	3.934614	1.28E-06
SL3.0ch03	68859181	68859202	+	22	20.00813	4.403742	0.004825

SL3.0ch03	68859542	68859563	+	22	42.24576	3.11049	0.000506
SL3.0ch03	68859543	68859564	+	22	30.51179	4.299852	0.000422
SL3.0ch03	68859543	68859565	+	23	39.79515	4.331778	0.00018
SL3.0ch03	68859610	68859631	+	22	33.1461	3.456749	0.001096
SL3.0ch03	68860051	68860072	+	22	67.96824	3.16624	0.000283
SL3.0ch03	68860183	68860204	+	22	31.69126	4.09351	0.00031
SL3.0ch03	68860195	68860216	+	22	22.85729	5.226279	0.003531
SL3.0ch03	70715300	70715320	+	21	41.04366	3.740295	0.00613
SL3.0ch03	71084853	71084876	-	24	19.69946	7.423608	0.000894
SL3.0ch04	83019	83042	+	24	29.09178	3.057639	0.005016
SL3.0ch04	1103579	1103602	-	24	130.3922	2.233099	0.00332
SL3.0ch04	1757524	1757547	-	24	35.48285	4.838793	4.17E-05
SL3.0ch04	1757527	1757550	-	24	21.29582	3.457033	0.008704
SL3.0ch04	1790474	1790497	-	24	138.1741	3.565121	5E-09
SL3.0ch04	3191892	3191915	+	24	26.92921	3.200431	0.003409
SL3.0ch04	3191893	3191916	+	24	46.24503	3.545366	1.97E-05
SL3.0ch04	3990219	3990242	-	24	469.3613	1.935719	0.001799
SL3.0ch04	4350760	4350783	+	24	93.06781	3.479832	3.18E-08
SL3.0ch04	4469673	4469696	-	24	35.1406	3.133469	0.003043
SL3.0ch04	4469676	4469699	-	24	20.26239	3.687886	0.009076
SL3.0ch04	4469686	4469709	-	24	113.6199	3.195793	3.14E-05
SL3.0ch04	4906254	4906275	+	22	409.1884	4.279925	6.64E-13
SL3.0ch04	4906266	4906287	+	22	331.8051	5.14463	1.42E-15
SL3.0ch04	4906267	4906288	+	22	184.7284	3.08119	9.21E-05
SL3.0ch04	4906268	4906289	+	22	253.601	3.367894	4.35E-06
SL3.0ch04	4906277	4906298	+	22	121.9513	3.245681	5.02E-05
SL3.0ch04	4906279	4906300	+	22	64.05885	3.2846	0.000169
SL3.0ch04	4906387	4906408	+	22	50.73287	2.955533	0.005649
SL3.0ch04	4906435	4906456	+	22	64.01704	3.375328	1.63E-05
SL3.0ch04	4906492	4906514	+	23	106.2776	4.21057	2E-09
SL3.0ch04	4906613	4906634	+	22	36.63674	3.408902	0.000826
SL3.0ch04	4906670	4906692	+	23	41.68987	4.218734	1.42E-05
SL3.0ch04	4906676	4906695	+	20	48.78439	2.916077	0.001065
SL3.0ch04	4906676	4906697	+	22	190.0947	4.085483	1.73E-10
SL3.0ch04	4906682	4906703	+	22	38.03113	3.786915	0.000435
SL3.0ch04	4906684	4906705	+	22	51.05337	4.420169	6.45E-06
SL3.0ch04	4906684	4906706	+	23	26.15112	4.846241	0.001329
SL3.0ch04	4906791	4906812	+	22	25.42691	3.987841	0.001577
SL3.0ch04	4906906	4906928	+	23	13.59434	6.889307	0.005346
SL3.0ch04	4906916	4906937	+	22	41.71479	5.481728	5.57E-05
SL3.0ch04	4906920	4906941	+	22	29.80253	4.299444	0.000465
SL3.0ch04	4906921	4906942	+	22	37.65329	3.530946	0.000438
SL3.0ch04	4906966	4906987	+	22	20.71481	5.09051	0.00815
SL3.0ch04	4906968	4906989	+	22	91.52407	5.350401	1.45E-08
SL3.0ch04	4906970	4906991	+	22	24.11578	3.859997	0.008873
SL3.0ch04	4906980	4907001	+	22	131.569	3.740061	2.4E-06
SL3.0ch04	4906982	4907003	+	22	23.91106	6.263701	0.00869
SL3.0ch04	4906983	4907004	+	22	356.3911	3.239671	2.83E-06
SL3.0ch04	4907004	4907025	+	22	47.95867	3.229598	0.004491

SL3.0ch04	4907163	4907184 +	22	50.66404	2.307435	0.007127
SL3.0ch04	4907225	4907246 +	22	35.13543	5.756044	0.000409
SL3.0ch04	4907294	4907315 +	22	52.76187	3.909674	6.21E-06
SL3.0ch04	4907296	4907317 +	22	88.92507	2.549171	0.000878
SL3.0ch04	4907297	4907318 +	22	30.768	5.667364	0.001491
SL3.0ch04	4907408	4907429 +	22	32.60664	4.360263	0.000321
SL3.0ch04	4907418	4907439 +	22	244.6933	4.112773	6.16E-13
SL3.0ch04	4907421	4907442 +	22	213.4504	1.880662	0.006584
SL3.0ch04	4907422	4907443 +	22	508.4563	3.660825	3.14E-11
SL3.0ch04	4907423	4907444 +	22	213.7475	2.03386	0.007606
SL3.0ch04	4907424	4907445 +	22	102.733	4.091295	5.09E-10
SL3.0ch04	4907427	4907448 +	22	110.4748	3.632943	1.68E-06
SL3.0ch04	4907443	4907464 +	22	117.3675	3.344094	3.92E-05
SL3.0ch04	4907444	4907465 +	22	64.62144	3.856908	7.89E-05
SL3.0ch04	4907543	4907564 +	22	23.13513	4.613936	0.003616
SL3.0ch04	4907554	4907575 +	22	44.60685	6.154324	9.45E-05
SL3.0ch04	4907576	4907597 +	22	45.33068	3.237749	0.000214
SL3.0ch04	4907712	4907733 +	22	15.46953	7.070982	0.002969
SL3.0ch04	4907862	4907883 +	22	22.85544	3.78025	0.005649
SL3.0ch04	4908085	4908106 +	22	22.67575	4.176919	0.004621
SL3.0ch04	4908086	4908107 +	22	1863.542	4.856675	3.02E-19
SL3.0ch04	4908088	4908109 +	22	1169.872	4.581012	7.36E-15
SL3.0ch04	4908089	4908111 +	23	501.3256	3.327419	4.68E-08
SL3.0ch04	4908091	4908112 +	22	1978.331	4.135877	5.9E-11
SL3.0ch04	4908142	4908163 +	22	89.71216	3.980728	3.8E-07
SL3.0ch04	4908148	4908169 +	22	345.5435	3.816706	2.15E-07
SL3.0ch04	4908196	4908217 +	22	100.3941	4.097041	3.67E-05
SL3.0ch04	4908381	4908402 +	22	29.54006	4.171176	0.000728
SL3.0ch04	4908401	4908422 +	22	384.2286	3.512176	1.6E-07
SL3.0ch04	4908402	4908423 +	22	27.60465	4.382083	0.001076
SL3.0ch04	4908403	4908424 +	22	74.13678	4.832212	8.15E-08
SL3.0ch04	4908415	4908437 +	23	14.90323	7.012791	0.003717
SL3.0ch04	4908442	4908462 +	21	139.9434	2.527367	0.009652
SL3.0ch04	4908697	4908718 +	22	27.45806	3.396025	0.00606
SL3.0ch04	4908698	4908719 +	22	66.7497	3.903266	2.13E-07
SL3.0ch04	4909423	4909444 +	22	33.08693	5.766851	0.000588
SL3.0ch04	4909424	4909445 +	22	19.94867	4.974924	0.008354
SL3.0ch04	4921087	4921110 +	24	160.1332	2.831101	0.000917
SL3.0ch04	5696240	5696261 +	22	21.45103	4.55209	0.003588
SL3.0ch04	5696358	5696379 -	22	30.1546	5.581934	0.000817
SL3.0ch04	5696404	5696425 -	22	29.1811	6.552814	0.003004
SL3.0ch04	5696405	5696426 -	22	26.52406	3.923919	0.002716
SL3.0ch04	5696419	5696440 +	22	12.92231	6.803972	0.00644
SL3.0ch04	5696424	5696445 +	22	21.39288	4.452431	0.004014
SL3.0ch04	5696824	5696845 -	22	16.01884	7.113174	0.002876
SL3.0ch04	5696852	5696873 +	22	92.4986	4.513008	1.2E-10
SL3.0ch04	5697050	5697071 -	22	28.77949	4.979744	0.000438
SL3.0ch04	5697062	5697083 +	22	30.44932	4.033205	0.000796
SL3.0ch04	5697066	5697086 +	21	98.3842	4.065289	1.59E-07

SL3.0ch04	5697148	5697169 -	22	48.42095	5.230787	1.99E-06
SL3.0ch04	5697152	5697173 -	22	21.58309	5.04679	0.004214
SL3.0ch04	5697153	5697174 -	22	13.44479	6.864391	0.004809
SL3.0ch04	5698302	5698323 +	22	70.76908	2.447408	0.008727
SL3.0ch04	5698576	5698598 +	23	16.73306	7.18208	0.001866
SL3.0ch04	7090210	7090231 -	22	25.42512	7.786344	0.000296
SL3.0ch04	7199900	7199923 -	24	37.93245	2.615762	0.003993
SL3.0ch04	7254566	7254589 -	24	26.57891	3.213679	0.006096
SL3.0ch04	7319577	7319598 -	22	11.99277	6.701153	0.007295
SL3.0ch04	7580143	7580166 +	24	20.36378	7.469653	0.000959
SL3.0ch04	7580148	7580171 -	24	13.42354	6.870742	0.00461
SL3.0ch04	7580172	7580195 +	24	15.09144	7.044302	0.003825
SL3.0ch04	7580177	7580200 +	24	15.84734	7.109719	0.002321
SL3.0ch04	7580179	7580202 -	24	37.9251	8.364681	3.57E-05
SL3.0ch04	7580181	7580204 -	24	13.69645	6.903242	0.005055
SL3.0ch04	7580182	7580204 -	23	15.63314	7.090545	0.002566
SL3.0ch04	7580182	7580205 -	24	68.62043	9.223379	1.5E-06
SL3.0ch04	7580182	7580205 +	24	757.1301	9.684385	1.16E-21
SL3.0ch04	7580183	7580206 -	24	18.88283	7.363064	0.001096
SL3.0ch04	7580183	7580205 -	23	39.73358	8.43072	2.76E-05
SL3.0ch04	7580184	7580205 -	22	29.54648	8.002597	0.00013
SL3.0ch04	7580184	7580207 -	24	381.6092	8.69597	9.46E-17
SL3.0ch04	7580185	7580207 -	23	15.21231	7.044691	0.002778
SL3.0ch04	7580190	7580213 -	24	23.4084	6.235876	0.006494
SL3.0ch04	7580190	7580213 +	24	14.16945	6.948689	0.003746
SL3.0ch04	7580191	7580214 +	24	559.1727	8.505173	2.37E-24
SL3.0ch04	7580192	7580215 +	24	15.78986	7.102498	0.002485
SL3.0ch04	7580193	7580214 +	22	12.83513	6.797954	0.006906
SL3.0ch04	7580194	7580217 -	24	13.58313	6.892446	0.005433
SL3.0ch04	7580195	7580217 -	23	32.1077	6.693329	0.001966
SL3.0ch04	11090179	11090200 -	22	24.85663	3.953134	0.001655
SL3.0ch04	12442590	12442613 -	24	28.53381	2.916436	0.006356
SL3.0ch04	38059276	38059297 -	22	22.70988	6.189132	0.007901
SL3.0ch04	43292086	43292107 +	22	27.76138	5.46175	0.001148
SL3.0ch04	43292341	43292362 +	22	201.2327	4.7162	4.68E-14
SL3.0ch04	43775379	43775400 -	22	54.33249	4.591527	2.4E-07
SL3.0ch04	43775380	43775401 -	22	32.33958	5.073558	0.000164
SL3.0ch04	43775382	43775403 -	22	66.8033	4.1033	3.51E-08
SL3.0ch04	43775383	43775404 -	22	27.1578	5.433337	0.001142
SL3.0ch04	44678630	44678653 -	24	35.69936	2.827986	0.006603
SL3.0ch04	44777924	44777947 +	24	24.25908	3.703056	0.009025
SL3.0ch04	45090118	45090139 -	22	32.29019	3.788716	0.003152
SL3.0ch04	50512701	50512724 +	24	66.18051	2.102098	0.009157
SL3.0ch04	50838393	50838414 +	22	35.03618	5.187913	0.000103
SL3.0ch04	50838397	50838418 +	22	122.2151	4.48921	8.83E-13
SL3.0ch04	50838400	50838419 +	20	22.40409	3.495152	0.007705
SL3.0ch04	50838400	50838421 +	22	78.21887	4.22709	6.67E-09
SL3.0ch04	52211032	52211055 -	24	78.61623	2.127208	0.004022
SL3.0ch04	53661231	53661252 +	22	30.74236	5.655455	0.000575

SL3.0ch04	53661639	53661660	+	22	25.22687	6.339704	0.005601
SL3.0ch04	53661640	53661661	+	22	101.1225	5.076519	2.97E-09
SL3.0ch04	53661648	53661669	+	22	22.75674	4.130644	0.005272
SL3.0ch04	53661649	53661670	+	22	47.58086	4.559858	1.7E-05
SL3.0ch04	54430265	54430288	+	24	42.93875	2.600436	0.005749
SL3.0ch04	54481133	54481156	-	24	419.9791	1.685232	0.00332
SL3.0ch04	55087480	55087503	+	24	46.8464	2.933065	0.000579
SL3.0ch04	55103590	55103613	+	24	34.3965	3.613309	0.001661
SL3.0ch04	58520316	58520339	-	24	33.26532	3.622406	0.005055
SL3.0ch04	59185643	59185666	+	24	118.0396	2.963875	1.32E-05
SL3.0ch04	59185999	59186022	-	24	65.10103	2.082097	0.008909
SL3.0ch04	59655029	59655050	+	22	14.87632	7.012125	0.003151
SL3.0ch04	59655093	59655114	+	22	158.071	3.827112	5.35E-11
SL3.0ch04	60285898	60285919	+	22	24.2877	7.716551	0.000443
SL3.0ch04	60644818	60644839	+	22	27.43355	4.102235	0.000677
SL3.0ch04	60644829	60644850	+	22	11.09416	6.591319	0.009712
SL3.0ch04	61710847	61710870	+	24	36.25819	2.670936	0.004614
SL3.0ch04	62251038	62251061	-	24	249.8256	2.052407	0.00111
SL3.0ch04	62461536	62461559	-	24	13.4878	6.872143	0.005679
SL3.0ch04	62461539	62461562	-	24	22.04993	6.143892	0.009748
SL3.0ch04	62461540	62461563	-	24	107.641	5.911547	6.66E-11
SL3.0ch04	62670301	62670323	+	23	84.85369	2.513633	0.000411
SL3.0ch04	62670309	62670332	-	24	24.803	3.553278	0.006494
SL3.0ch04	62670310	62670333	-	24	33.60426	4.410083	0.000111
SL3.0ch04	62678658	62678681	+	24	28.06515	3.208867	0.003639
SL3.0ch04	62678659	62678681	+	23	78.11708	2.790657	6.39E-05
SL3.0ch04	62705872	62705894	+	23	97.29036	2.336729	0.002859
SL3.0ch04	62715812	62715835	-	24	27.1717	6.452692	0.004383
SL3.0ch04	63266830	63266853	-	24	75.18832	3.727347	1.15E-07
SL3.0ch04	63266850	63266872	-	23	29.93948	3.395886	0.003265
SL3.0ch04	63628223	63628246	-	24	58.61285	2.44474	0.003552
SL3.0ch04	63697109	63697131	-	23	38.40571	5.994076	0.000879
SL3.0ch04	64579923	64579945	-	23	18.53022	4.235763	0.009569
SL3.0ch04	64579938	64579961	-	24	25.65375	4.32586	0.001065
SL3.0ch04	64579940	64579963	+	24	39.21759	3.658657	0.000221
SL3.0ch04	64679393	64679416	+	24	22.57489	3.507759	0.006096
SL3.0ch04	64991226	64991247	+	22	22.07463	3.731899	0.006298
SL3.0ch04	65585467	65585490	-	24	19.84415	20.26558	0.001397
SL3.0ch05	59480	59503	-	24	11.48441	6.644307	0.008516
SL3.0ch05	59488	59511	+	24	16.51885	7.163883	0.001942
SL3.0ch05	1028457	1028480	-	24	25.61736	3.623444	0.004606
SL3.0ch05	1028459	1028481	-	23	24.19051	4.167977	0.006433
SL3.0ch05	1953233	1953254	-	22	16.76398	7.182514	0.002094
SL3.0ch05	3054597	3054620	-	24	61.17929	3.56538	1.75E-06
SL3.0ch05	3109929	3109952	+	24	102.9983	2.410447	9.33E-05
SL3.0ch05	3109930	3109953	+	24	99.87996	2.473237	5.6E-05
SL3.0ch05	3358524	3358547	-	24	108.7974	4.517501	2.37E-08
SL3.0ch05	3602311	3602334	-	24	13.90978	6.914861	0.004414
SL3.0ch05	3620296	3620319	+	24	659.5806	2.386445	5.6E-05

SL3.0ch05	3799988	3800011	+	24	106.6009	1.984818	0.006412
SL3.0ch05	3809927	3809946	-	20	309.8415	6.594827	1.74E-15
SL3.0ch05	3809928	3809947	+	20	56.33017	5.482038	5.02E-07
SL3.0ch05	3809928	3809951	+	24	39.66891	5.993193	0.000274
SL3.0ch05	3809928	3809948	+	21	2347.556	6.54452	3.65E-48
SL3.0ch05	3809946	3809965	+	20	16.48139	7.153176	0.003304
SL3.0ch05	3809946	3809966	+	21	33.05853	8.162639	9.65E-05
SL3.0ch05	3809947	3809966	-	20	37.68547	4.192306	0.000831
SL3.0ch05	3809947	3809967	-	21	14694.92	5.354821	3.55E-05
SL3.0ch05	3809947	3809969	-	23	76.78552	5.687718	7.76E-08
SL3.0ch05	3809947	3809968	-	22	63.11337	6.660543	8.46E-06
SL3.0ch05	3809947	3809970	-	24	34.70749	8.233108	6.58E-05
SL3.0ch05	3809948	3809967	-	20	576.827	5.226203	3.85E-18
SL3.0ch05	3809949	3809968	+	20	5577.437	6.057478	1.25E-30
SL3.0ch05	3809949	3809969	+	21	23041.87	6.29658	1.31E-37
SL3.0ch05	3809949	3809972	+	24	692.8508	6.498481	1.59E-24
SL3.0ch05	3809949	3809970	+	22	298.2501	8.941866	5.55E-12
SL3.0ch05	3809949	3809971	+	23	302.7146	8.970844	2.71E-11
SL3.0ch05	3809950	3809970	+	21	40.41709	5.396675	5.62E-05
SL3.0ch05	3809951	3809971	+	21	74.75128	6.263014	2.32E-07
SL3.0ch05	3809951	3809970	+	20	18.84981	7.353778	0.001197
SL3.0ch05	3809951	3809974	+	24	38.35018	8.385954	0.000109
SL3.0ch05	3809951	3809972	+	22	364.4143	10.20452	7.46E-09
SL3.0ch05	3809952	3809972	+	21	47.4708	5.188463	1.5E-05
SL3.0ch05	3809952	3809973	+	22	40.71792	8.46856	7.01E-05
SL3.0ch05	3809953	3809973	+	21	34.25771	6.785756	0.002096
SL3.0ch05	3809958	3809978	+	21	43.49702	6.1696	0.000219
SL3.0ch05	3809959	3809979	+	21	138.8899	6.609784	0.001313
SL3.0ch05	3809962	3809982	+	21	33.03479	6.732471	0.002028
SL3.0ch05	3809965	3809984	+	20	18.41609	7.315114	0.002599
SL3.0ch05	3809968	3809988	-	21	16.46672	7.169961	0.002859
SL3.0ch05	3809969	3809989	+	21	36.48905	5.81411	0.000316
SL3.0ch05	3809986	3810006	-	21	61.08018	5.57382	1.95E-07
SL3.0ch05	3809987	3810007	+	21	26.2819	7.831664	0.000259
SL3.0ch05	3809988	3810008	+	21	89.29399	6.591547	2.06E-08
SL3.0ch05	3809989	3810008	-	20	21.79922	5.037298	0.008518
SL3.0ch05	3809989	3810009	-	21	28353.29	5.237723	4.68E-21
SL3.0ch05	3809989	3810012	-	24	65.83244	5.795916	2.42E-06
SL3.0ch05	3809989	3810011	-	23	36.42731	6.880906	0.001722
SL3.0ch05	3809989	3810010	-	22	47.39311	7.256443	0.000442
SL3.0ch05	3809990	3810010	-	21	158.5903	5.151511	1.08E-12
SL3.0ch05	3809990	3810009	-	20	538.299	5.43023	5.1E-21
SL3.0ch05	3809991	3810011	+	21	60.33976	7.605712	0.000207
SL3.0ch05	3809992	3810012	-	21	61.11492	6.614721	1.59E-05
SL3.0ch05	3809993	3810014	-	22	27.93193	4.937699	0.000534
SL3.0ch05	3809993	3810013	+	21	23.79338	5.177286	0.003649
SL3.0ch05	3809993	3810013	-	21	32.4899	8.138749	9.54E-05
SL3.0ch05	3809994	3810014	-	21	57.16874	5.944846	3.9E-06
SL3.0ch05	3809995	3810018	+	24	114.5523	2.675873	1.05E-05

SL3.0ch05	3809995	3810018 -	24	12.51372	6.775721	0.008373
SL3.0ch05	3809995	3810015 -	21	23.31117	7.660078	0.000504
SL3.0ch05	3809996	3810019 +	24	87.18158	4.774308	5.17E-10
SL3.0ch05	3809996	3810016 -	21	58.19541	6.584304	1.33E-05
SL3.0ch05	3809996	3810019 -	24	13.21381	6.853892	0.006937
SL3.0ch05	3809997	3810020 -	24	13.43047	6.878887	0.009029
SL3.0ch05	3809998	3810019 +	22	12.38058	6.744076	0.006827
SL3.0ch05	3809998	3810018 -	21	115.1374	7.534785	8.92E-08
SL3.0ch05	3809999	3810019 +	21	514.6658	5.546661	2.75E-18
SL3.0ch05	3809999	3810020 +	22	42.80841	6.138558	5.9E-05
SL3.0ch05	3809999	3810022 +	24	14.79924	7.014269	0.004301
SL3.0ch05	3809999	3810023 +	25	101.4626	7.324626	9.6E-08
SL3.0ch05	3810000	3810019 +	20	22.62335	4.521779	0.007074
SL3.0ch05	3810000	3810023 +	24	393.4652	5.048358	8.27E-21
SL3.0ch05	3810000	3810020 +	21	113.3295	5.856269	3.4E-11
SL3.0ch05	3810002	3810023 -	22	18.6139	7.336272	0.00115
SL3.0ch05	3810003	3810023 -	21	619.9456	6.435163	1.68E-28
SL3.0ch05	3810004	3810027 -	24	60.07814	3.274714	0.000719
SL3.0ch05	3810004	3810023 -	20	93.52938	6.620074	1.25E-07
SL3.0ch05	3810005	3810025 -	21	123.5324	6.03403	3.19E-11
SL3.0ch05	3810006	3810026 -	21	149.4251	6.533568	4.66E-12
SL3.0ch05	3810007	3810027 -	21	90.37922	7.184613	3.47E-07
SL3.0ch05	3810007	3810026 -	20	99.56762	7.281544	3.32E-07
SL3.0ch05	3810008	3810028 -	21	181.7269	5.37057	3.92E-14
SL3.0ch05	3810008	3810027 -	20	33.24884	5.779978	0.001097
SL3.0ch05	3810012	3810031 +	20	13.1008	6.832003	0.004988
SL3.0ch05	3810012	3810032 +	21	47.51063	7.2632	0.000345
SL3.0ch05	3810021	3810041 -	21	21.05088	4.430811	0.003866
SL3.0ch05	3810021	3810044 -	24	154.2055	6.953596	4.41E-13
SL3.0ch05	3810022	3810044 -	23	12.16071	6.71367	0.009025
SL3.0ch05	3810022	3810042 -	21	120.5709	7.601973	3.94E-08
SL3.0ch05	3810030	3810053 -	24	16.57592	7.168063	0.002013
SL3.0ch05	3810031	3810055 -	25	68.02898	5.823726	8.34E-08
SL3.0ch05	3810031	3810051 -	21	896.5486	6.47063	2.38E-26
SL3.0ch05	3810031	3810050 -	20	57.49102	6.482723	1.87E-05
SL3.0ch05	3810031	3810053 -	23	4465.549	6.755939	3.33E-53
SL3.0ch05	3810031	3810056 -	26	14.39253	6.974509	0.004985
SL3.0ch05	3810031	3810054 -	24	10817.53	7.271902	8.9E-53
SL3.0ch05	3810031	3810052 -	22	164.9464	8.020565	3.04E-09
SL3.0ch05	3810032	3810054 -	23	50.91395	6.385904	2.12E-05
SL3.0ch05	3810032	3810053 -	22	16.80735	7.182708	0.002338
SL3.0ch05	3810033	3810056 +	24	11.72919	6.679724	0.00872
SL3.0ch05	3810033	3810052 +	20	12.33641	6.74614	0.00716
SL3.0ch05	3810033	3810053 +	21	104.4405	7.368414	4.33E-08
SL3.0ch05	3810033	3810054 +	22	107.0703	9.860746	1.28E-07
SL3.0ch05	3810038	3810059 -	22	13.30054	6.853727	0.004687
SL3.0ch05	3810038	3810058 -	21	16.86284	7.190202	0.001966
SL3.0ch05	3810038	3810061 -	24	20.13797	7.458631	0.001057
SL3.0ch05	3810039	3810059 -	21	553.9483	5.892984	3.35E-19

SL3.0ch05	3810039	3810058 -	20	105.9063	6.15542	1.75E-09
SL3.0ch05	3810039	3810062 -	24	12.06717	6.718402	0.007438
SL3.0ch05	3810039	3810060 -	22	48.39059	8.713573	1.14E-05
SL3.0ch05	3810040	3810060 -	21	49.48662	4.620064	9.53E-06
SL3.0ch05	3810040	3810063 -	24	32.84454	4.731225	0.000147
SL3.0ch05	3810040	3810059 -	20	115.3226	7.48952	1.91E-07
SL3.0ch05	3810043	3810063 -	21	122.126	5.774511	2.23E-10
SL3.0ch05	3810044	3810063 -	20	24.13833	4.550141	0.008902
SL3.0ch05	3810045	3810065 -	21	76.20603	5.290843	2.13E-07
SL3.0ch05	3810048	3810068 -	21	45.06679	6.173559	5.75E-05
SL3.0ch05	3810054	3810074 +	21	46.46522	7.228213	0.000366
SL3.0ch05	3810073	3810093 -	21	130.3637	5.484429	2.07E-12
SL3.0ch05	3810075	3810095 +	21	25.22875	6.312623	0.005583
SL3.0ch05	3810086	3810106 -	21	25.63554	5.269248	0.005237
SL3.0ch05	3810093	3810113 +	21	41.14762	5.420523	4.84E-05
SL3.0ch05	3810094	3810114 -	21	1473.891	4.433657	9.92E-12
SL3.0ch05	3810094	3810115 -	22	17.92338	7.275076	0.001925
SL3.0ch05	3810095	3810114 -	20	189.4899	4.82737	2.78E-10
SL3.0ch05	3810096	3810116 -	21	57.57083	5.952792	4.51E-06
SL3.0ch05	3810096	3810116 +	21	42.07509	7.058562	0.00084
SL3.0ch05	3810120	3810143 -	24	24.06249	5.258523	0.002269
SL3.0ch05	3810122	3810145 +	24	50.12934	7.341006	0.000287
SL3.0ch05	3810136	3810156 -	21	30.0434	3.426214	0.005415
SL3.0ch05	3939324	3939346 -	23	14.6082	6.978551	0.004585
SL3.0ch05	3939326	3939349 -	24	34.97136	6.790843	0.001618
SL3.0ch05	4508782	4508805 +	24	29.60374	3.486874	0.000926
SL3.0ch05	5188676	5188699 -	24	14.78037	7.014096	0.003977
SL3.0ch05	6284948	6284970 +	23	34.0825	3.028273	0.002763
SL3.0ch05	16399383	16399404 -	22	41.20359	3.455313	0.000565
SL3.0ch05	20196020	20196043 +	24	17.81939	7.275603	0.001365
SL3.0ch05	20700654	20700675 +	22	25.28489	3.68373	0.003353
SL3.0ch05	26878462	26878484 -	23	26.00292	5.439105	0.007393
SL3.0ch05	26996316	26996337 +	22	23.86641	6.234413	0.006993
SL3.0ch05	26996316	26996338 +	23	16.2573	7.148894	0.002625
SL3.0ch05	26996722	26996743 +	22	14.92217	7.02	0.003503
SL3.0ch05	26998809	26998829 +	21	18.64238	7.333435	0.001397
SL3.0ch05	29312511	29312533 -	23	22.88842	7.636628	0.000425
SL3.0ch05	30895635	30895658 +	24	13.23904	6.845108	0.004836
SL3.0ch05	31147314	31147335 -	22	13.46282	6.860676	0.0076
SL3.0ch05	55294835	55294858 -	24	21.1788	7.526693	0.000848
SL3.0ch05	55489638	55489659 -	22	25.58364	6.334827	0.005025
SL3.0ch05	57483421	57483442 -	22	23.59687	4.233496	0.003078
SL3.0ch05	59780703	59780726 -	24	23.26899	7.659074	0.000399
SL3.0ch05	59961464	59961485 -	22	13.90255	6.914213	0.004184
SL3.0ch05	59961957	59961978 -	22	16.57913	7.168493	0.001938
SL3.0ch05	59961958	59961979 -	22	36.17677	4.006331	6.85E-05
SL3.0ch05	59961959	59961980 -	22	19.78372	4.335218	0.006517
SL3.0ch05	59961961	59961982 -	22	33.51471	4.108275	0.000156
SL3.0ch05	59962367	59962388 -	22	174.1186	4.043242	1.04E-10

SL3.0ch05	59962368	59962389	-	22	53.24994	5.839474	2.03E-06
SL3.0ch05	59962369	59962390	-	22	18.82494	4.310147	0.008297
SL3.0ch05	59962465	59962486	-	22	260.4143	4.64742	2.59E-17
SL3.0ch05	59962469	59962490	-	22	15.23722	7.046668	0.00277
SL3.0ch05	59962472	59962493	-	22	39.55886	4.456817	3.11E-05
SL3.0ch05	59968936	59968957	-	22	11.46673	6.642342	0.008591
SL3.0ch05	59968938	59968959	-	22	23.43903	7.672563	0.000394
SL3.0ch05	59968968	59968989	-	22	28.49562	5.499301	0.001063
SL3.0ch05	59969027	59969048	-	22	162.717	5.416536	6.89E-13
SL3.0ch05	59969038	59969059	-	22	25.88032	3.679147	0.003083
SL3.0ch05	61741609	61741630	+	22	116.6235	3.413142	1.2E-06
SL3.0ch05	61741636	61741657	+	22	11.35096	6.622811	0.009213
SL3.0ch05	61741693	61741714	+	22	22.40007	5.095547	0.003821
SL3.0ch05	61741791	61741812	+	22	21.62604	5.041486	0.004851
SL3.0ch05	61741794	61741815	+	22	110.6247	5.249061	2.65E-12
SL3.0ch05	61742208	61742229	+	22	448.3911	4.665581	6.17E-17
SL3.0ch05	61742211	61742232	+	22	30.98748	3.953195	0.000534
SL3.0ch05	61742713	61742734	+	22	18.03394	7.287173	0.001662
SL3.0ch05	61742715	61742736	+	22	81.97169	4.98909	6.91E-10
SL3.0ch05	61742716	61742737	+	22	18.98682	7.361585	0.001238
SL3.0ch05	61743013	61743035	+	23	320.5853	1.822837	0.002541
SL3.0ch05	61743237	61743258	+	22	22.24909	4.441451	0.007521
SL3.0ch05	61743328	61743349	+	22	32.05034	8.124396	8.27E-05
SL3.0ch05	61743652	61743673	+	22	33.38559	3.322302	0.000849
SL3.0ch05	61743652	61743674	+	23	60.79698	4.256612	1.29E-07
SL3.0ch05	61743663	61743684	+	22	27.7862	7.913182	0.000196
SL3.0ch05	61743739	61743760	+	22	22.99762	5.239595	0.003008
SL3.0ch05	61743867	61743888	+	22	141.1893	5.208317	2.43E-12
SL3.0ch05	61743868	61743889	+	22	83.85827	4.309476	5.11E-09
SL3.0ch05	61744235	61744256	+	22	51.83497	5.044554	1.24E-06
SL3.0ch05	61744279	61744300	+	22	35.71958	4.563788	6.41E-05
SL3.0ch05	61744355	61744376	+	22	66.81335	4.892373	4.65E-08
SL3.0ch05	61744356	61744377	+	22	38.58189	3.326786	0.000968
SL3.0ch05	61744357	61744378	+	22	315.6822	4.725307	9.05E-15
SL3.0ch05	61744936	61744957	+	22	28.49835	3.229551	0.003302
SL3.0ch05	61745058	61745079	+	22	126.9145	2.946529	3.47E-07
SL3.0ch05	61745939	61745960	+	22	21.02637	4.989593	0.007247
SL3.0ch05	61746909	61746931	+	23	50.57843	2.901987	0.000702
SL3.0ch05	61746912	61746933	+	22	93.52648	6.04221	0.002645
SL3.0ch05	61746980	61747001	+	22	42.26906	3.154987	0.003717
SL3.0ch05	61746984	61747005	+	22	89.81943	3.37106	9.33E-05
SL3.0ch05	61747038	61747059	+	22	18.44187	7.320806	0.001397
SL3.0ch05	61747044	61747065	+	22	25.75132	4.323695	0.001377
SL3.0ch05	61747305	61747326	+	22	30.72237	8.057508	0.000146
SL3.0ch05	61748565	61748586	+	22	106.5677	3.102614	1.8E-05
SL3.0ch05	61750140	61750161	+	22	35.06082	2.847561	0.004182
SL3.0ch05	61750202	61750223	+	22	47.83695	4.390696	1.47E-05
SL3.0ch05	61750345	61750366	+	22	45.37155	7.174719	0.000425
SL3.0ch05	61750590	61750611	+	22	59.38012	7.582099	0.0002

SL3.0ch05	61750592 61750613 +	22	35.36253	6.810047	0.001746
SL3.0ch05	61750593 61750614 +	22	51.69806	7.364075	0.000223
SL3.0ch05	61751146 61751167 +	22	447.0633	2.094068	0.004947
SL3.0ch05	61751780 61751801 +	22	22.83349	5.179043	0.002898
SL3.0ch05	61751954 61751976 +	23	21.84697	4.477815	0.004982
SL3.0ch05	61752528 61752549 +	22	158.0165	3.929242	7.38E-09
SL3.0ch05	61752529 61752550 +	22	115.3705	5.22922	1.29E-08
SL3.0ch05	61752673 61752694 +	22	150.4615	3.076746	0.000191
SL3.0ch05	61752908 61752929 +	22	24.53528	7.73142	0.000373
SL3.0ch05	61752985 61753006 +	22	48.79689	4.766131	8.47E-06
SL3.0ch05	61752986 61753007 +	22	25.3122	4.210322	0.002065
SL3.0ch05	61753219 61753240 +	22	28.98656	6.542286	0.003054
SL3.0ch05	61753253 61753272 +	20	23.67349	3.535775	0.007746
SL3.0ch05	61753275 61753297 +	23	21.57388	7.554192	0.000576
SL3.0ch05	61753400 61753421 +	22	21.72162	3.662734	0.008074
SL3.0ch05	61753402 61753424 +	23	106.1553	3.761373	1.23E-08
SL3.0ch05	61753402 61753423 +	22	40.05319	5.426197	3.79E-05
SL3.0ch05	61753612 61753633 +	22	50.47991	6.377684	3.48E-05
SL3.0ch05	61753613 61753634 +	22	22.82105	5.178794	0.003573
SL3.0ch05	61753615 61753636 +	22	41.47561	5.513521	2.81E-05
SL3.0ch05	61753620 61753641 +	22	11.83487	6.6873	0.008586
SL3.0ch05	61753844 61753863 +	20	69.44702	3.680002	0.000254
SL3.0ch05	61753853 61753874 +	22	23.54698	4.594474	0.002295
SL3.0ch05	61753856 61753877 +	22	11.53302	6.645928	0.008613
SL3.0ch05	61753929 61753950 +	22	12.10288	6.712461	0.007409
SL3.0ch05	61754226 61754247 +	22	30.32505	5.017584	0.000268
SL3.0ch05	61754744 61754765 +	22	97.47045	5.943438	3.09E-10
SL3.0ch05	61754888 61754909 +	22	163.8593	4.841935	4.29E-11
SL3.0ch05	61755203 61755224 +	22	20.62894	4.404643	0.004158
SL3.0ch05	61755462 61755483 +	22	20.77263	3.680856	0.007183
SL3.0ch05	61755464 61755485 +	22	461.2139	4.405215	2.36E-09
SL3.0ch05	61755489 61755510 +	22	44.03254	5.528088	1.37E-05
SL3.0ch05	61755490 61755511 +	22	27.56311	3.808766	0.002589
SL3.0ch05	61755733 61755754 +	22	65.78575	2.371604	0.003742
SL3.0ch05	61755739 61755760 +	22	32.95555	4.690015	0.000191
SL3.0ch05	61755894 61755915 +	22	15.65718	7.083315	0.00276
SL3.0ch05	61756084 61756105 +	22	40.43091	4.39342	1.35E-05
SL3.0ch05	61763670 61763691 +	22	23.76847	5.176858	0.003511
SL3.0ch05	61763891 61763912 +	22	40.37654	4.995608	1.77E-05
SL3.0ch05	61763893 61763914 +	22	74.8582	2.813752	0.000171
SL3.0ch05	61763894 61763915 +	22	84.74631	7.122728	3.29E-07
SL3.0ch05	61763895 61763916 +	22	98.79615	5.71152	8.03E-11
SL3.0ch05	61763896 61763917 +	22	19.04826	4.277628	0.008409
SL3.0ch05	61763896 61763918 +	23	42.6534	5.109576	6.76E-06
SL3.0ch05	61763897 61763918 +	22	32.85962	6.726041	0.001795
SL3.0ch05	62082395 62082418 +	24	80.22445	2.293467	0.002688
SL3.0ch05	62349739 62349760 +	22	29.17257	6.525692	0.004293
SL3.0ch05	64454494 64454516 +	23	107.4027	2.171109	0.003626
SL3.0ch05	64455868 64455890 +	23	39.14474	4.591931	6.13E-05

SL3.0ch05	64455869	64455890	+	22	64.06772	7.663108	0.000247
SL3.0ch05	64624269	64624292	+	24	223.9409	2.787717	0.000247
SL3.0ch05	64624284	64624307	+	24	688.7199	2.497325	0.000391
SL3.0ch06	226128	226149	-	22	12.87727	6.795515	0.007907
SL3.0ch06	422694	422715	-	22	25.56	4.312368	0.001054
SL3.0ch06	423754	423775	+	22	28.87475	3.844767	0.001133
SL3.0ch06	423888	423909	-	22	130.2346	4.488054	7.87E-10
SL3.0ch06	423931	423952	-	22	20.6167	4.345427	0.005929
SL3.0ch06	2280283	2280304	-	22	240.566	4.797933	2.1E-15
SL3.0ch06	2280284	2280305	-	22	178.9847	5.013432	2.86E-12
SL3.0ch06	2280285	2280306	-	22	57.40986	7.53516	0.000196
SL3.0ch06	2280286	2280307	-	22	36.09162	5.270154	0.000164
SL3.0ch06	2280287	2280308	-	22	47.53356	3.049515	0.001397
SL3.0ch06	2280289	2280310	-	22	58.46362	3.330742	2.51E-05
SL3.0ch06	2280290	2280311	-	22	54.25999	5.499532	3.24E-06
SL3.0ch06	2280291	2280312	-	22	87.52369	5.530597	2.5E-09
SL3.0ch06	2280292	2280313	-	22	84.18091	4.401441	9.69E-08
SL3.0ch06	2280293	2280314	-	22	22.93941	7.636921	0.001237
SL3.0ch06	2280294	2280315	-	22	34.31703	5.77453	0.000306
SL3.0ch06	2280299	2280320	+	22	12.13625	6.718832	0.007746
SL3.0ch06	2280361	2280382	+	22	22.43328	3.667463	0.009035
SL3.0ch06	2280441	2280462	-	22	28.54474	3.138576	0.003253
SL3.0ch06	2280443	2280462	-	20	1224.974	3.805066	8.16E-14
SL3.0ch06	2280444	2280465	-	22	134.3798	5.738953	3.73E-14
SL3.0ch06	2280445	2280466	-	22	18.32897	7.314927	0.001216
SL3.0ch06	2280446	2280467	-	22	15.80708	7.097589	0.002514
SL3.0ch06	2280448	2280469	-	22	25.31293	6.347982	0.004926
SL3.0ch06	2280450	2280471	-	22	205.2536	5.060886	3.26E-17
SL3.0ch06	2280451	2280471	-	21	1029.994	2.962048	0.000151
SL3.0ch06	2280451	2280472	-	22	1408.183	4.503144	2.36E-20
SL3.0ch06	2280451	2280470	-	20	100.8875	5.956225	2.12E-09
SL3.0ch06	2280452	2280473	-	22	19.70364	4.429768	0.005941
SL3.0ch06	2280505	2280524	-	20	36.35042	3.478493	0.000352
SL3.0ch06	2280507	2280528	+	22	245.5489	5.516575	9.33E-19
SL3.0ch06	2280511	2280532	-	22	79.46062	5.619504	3.04E-09
SL3.0ch06	2280512	2280533	-	22	109.9388	4.430466	7.57E-12
SL3.0ch06	2280513	2280534	-	22	295.1439	7.940579	1.09E-16
SL3.0ch06	2280517	2280538	+	22	60.70075	5.04736	9.03E-08
SL3.0ch06	2280518	2280539	+	22	114.3048	4.791036	2.25E-12
SL3.0ch06	2280518	2280537	+	20	66.10657	7.736919	9.91E-05
SL3.0ch06	2280653	2280674	-	22	33.78356	6.766133	0.001517
SL3.0ch06	2280661	2280682	-	22	31.71583	3.177932	0.004947
SL3.0ch06	2280662	2280683	-	22	1212.022	2.835385	4.76E-07
SL3.0ch06	2280663	2280684	-	22	87.92235	3.506337	7.74E-06
SL3.0ch06	2280664	2280685	-	22	60.00132	6.560893	4.2E-06
SL3.0ch06	2300793	2300814	-	22	20.23074	4.990003	0.009398
SL3.0ch06	2300796	2300817	-	22	49.56234	4.660834	3.09E-06
SL3.0ch06	2301212	2301233	-	22	20.32521	4.425728	0.00445
SL3.0ch06	2301676	2301697	-	22	400.3171	3.830842	2.69E-12

SL3.0ch06	2303024	2303046	-	23	129.6398	4.779471	9.48E-13
SL3.0ch06	2303136	2303157	-	22	45.10925	5.597064	1.15E-05
SL3.0ch06	2303136	2303158	-	23	12.95855	6.818823	0.005496
SL3.0ch06	2303155	2303176	-	22	31.94042	6.68222	0.002207
SL3.0ch06	2303159	2303180	-	22	28.06479	4.403243	0.001188
SL3.0ch06	2303161	2303182	-	22	61.30325	4.73076	7.18E-07
SL3.0ch06	2303163	2303184	-	22	24.0395	5.249898	0.002708
SL3.0ch06	2303164	2303185	-	22	50.36089	4.498042	6.96E-06
SL3.0ch06	2303208	2303229	-	22	26.66253	6.426398	0.003993
SL3.0ch06	2303208	2303230	-	23	15.54274	7.084757	0.002789
SL3.0ch06	2303268	2303289	-	22	27.75098	6.45073	0.004084
SL3.0ch06	2303269	2303290	-	22	30.82343	4.667625	0.000223
SL3.0ch06	2303561	2303580	-	20	103.2322	4.612295	2.06E-08
SL3.0ch06	2303705	2303726	-	22	22.74924	3.732483	0.006292
SL3.0ch06	11287873	11287894	+	22	1153.225	5.692603	5.56E-29
SL3.0ch06	21035297	21035318	-	22	109.1712	3.917076	2.45E-10
SL3.0ch06	21035299	21035320	-	22	43.30505	5.573911	1.24E-05
SL3.0ch06	21049665	21049686	-	22	24.09691	5.199919	0.003715
SL3.0ch06	21049666	21049687	-	22	19.3972	7.396962	0.000978
SL3.0ch06	21049673	21049694	-	22	33.22735	5.773158	0.000359
SL3.0ch06	21049688	21049709	-	22	87.55827	5.615226	1.51E-09
SL3.0ch06	21049689	21049710	-	22	68.1014	5.476409	2.44E-08
SL3.0ch06	21049691	21049710	-	20	20.41809	3.618385	0.009025
SL3.0ch06	21049732	21049753	-	22	26.44786	5.445441	0.001795
SL3.0ch06	21049736	21049757	-	22	12.20254	6.723293	0.009176
SL3.0ch06	21049739	21049760	-	22	15.79307	7.103084	0.002307
SL3.0ch06	21049740	21049761	-	22	41.36254	6.048105	7.59E-05
SL3.0ch06	21049741	21049762	-	22	25.26997	7.776203	0.000301
SL3.0ch06	21049747	21049768	-	22	29.73651	4.142661	0.000891
SL3.0ch06	21049755	21049776	-	22	21.96636	4.088569	0.003512
SL3.0ch06	21049756	21049777	-	22	16.99786	7.200454	0.00204
SL3.0ch06	21049757	21049778	-	22	19.65044	7.419968	0.000952
SL3.0ch06	21049758	21049779	-	22	53.23639	5.841271	1.75E-06
SL3.0ch06	21049803	21049824	-	22	85.80022	6.509138	9.85E-09
SL3.0ch06	21049804	21049825	-	22	139.3447	4.766809	1.21E-13
SL3.0ch06	21049805	21049826	-	22	36.75107	5.917953	0.000215
SL3.0ch06	21049806	21049827	-	22	21.00024	4.023135	0.004488
SL3.0ch06	21049807	21049826	-	20	53.80718	4.164515	1.33E-05
SL3.0ch06	21050089	21050110	-	22	19.63362	4.95442	0.006584
SL3.0ch06	21050090	21050111	-	22	32.58574	5.701814	0.000332
SL3.0ch06	24875851	24875874	-	24	53.17904	3.11161	0.002256
SL3.0ch06	24875853	24875876	-	24	58.62783	3.950619	4.27E-05
SL3.0ch06	24875854	24875877	-	24	165.0892	3.000393	0.00013
SL3.0ch06	24875861	24875883	+	23	30.30145	4.66246	0.001129
SL3.0ch06	28319040	28319061	+	22	30.92871	4.150267	0.001266
SL3.0ch06	31204085	31204108	-	24	32.98726	2.753444	0.008916
SL3.0ch06	32086950	32086973	+	24	17.51321	7.257088	0.001784
SL3.0ch06	32086951	32086974	+	24	15.62758	7.095687	0.004168
SL3.0ch06	32149272	32149292	+	21	27.94749	3.155097	0.008961

SL3.0ch06	32150011 32150031 -	21	43.20513	3.382866	0.000438
SL3.0ch06	32151039 32151059 +	21	47.92722	3.349744	0.001313
SL3.0ch06	32151097 32151117 -	21	26.06258	3.642623	0.004926
SL3.0ch06	32151098 32151118 -	21	41.50868	3.518229	0.003005
SL3.0ch06	32152538 32152558 -	21	23.64567	4.1534	0.002285
SL3.0ch06	32152572 32152592 -	21	80.3109	3.719471	0.000162
SL3.0ch06	32152572 32152593 -	22	42.73737	6.094613	6.71E-05
SL3.0ch06	32152997 32153017 -	21	24.38614	7.720919	0.000471
SL3.0ch06	32153010 32153030 +	21	36.61091	3.327455	0.005682
SL3.0ch06	32153052 32153072 -	21	29.53898	6.54167	0.003304
SL3.0ch06	32153330 32153351 -	22	154.6758	4.845225	2.78E-12
SL3.0ch06	32153331 32153351 -	21	27.6427	4.338432	0.001258
SL3.0ch06	32153536 32153556 +	21	22.9149	5.128901	0.003523
SL3.0ch06	32153544 32153564 +	21	25.43035	4.211884	0.002541
SL3.0ch06	32153544 32153565 +	22	16.78289	7.185804	0.001947
SL3.0ch06	32153545 32153565 +	21	77.88093	4.852444	2.8E-08
SL3.0ch06	32153546 32153566 +	21	45.62248	5.13421	9.53E-06
SL3.0ch06	32155391 32155411 -	21	50.87719	3.017745	0.005231
SL3.0ch06	32155431 32155451 -	21	28.95101	4.038407	0.003858
SL3.0ch06	32155726 32155746 -	21	23.22551	5.14253	0.003873
SL3.0ch06	32155726 32155747 -	22	21.77672	7.559292	0.000644
SL3.0ch06	32155734 32155754 -	21	54.46152	6.410628	1.35E-05
SL3.0ch06	32155735 32155755 -	21	54.41197	3.862898	6.21E-06
SL3.0ch06	32155755 32155775 -	21	30.54907	4.473764	0.001346
SL3.0ch06	32156035 32156055 -	21	37.21178	4.832242	5.92E-05
SL3.0ch06	35127794 35127816 +	23	47.50989	2.987881	0.000677
SL3.0ch06	36080909 36080931 +	23	33.34271	4.428149	8.38E-05
SL3.0ch06	36080923 36080944 +	22	21.79562	7.561653	0.000601
SL3.0ch06	36080998 36081020 +	23	22.89642	7.634446	0.000449
SL3.0ch06	36080999 36081020 +	22	41.51224	6.007939	0.000105
SL3.0ch06	36081010 36081031 +	22	174.5322	4.63415	1.13E-11
SL3.0ch06	36081032 36081053 +	22	29.7484	4.221256	0.000483
SL3.0ch06	36081033 36081054 +	22	62.2741	4.710733	4.08E-07
SL3.0ch06	36081160 36081181 +	22	18.15221	4.258672	0.009235
SL3.0ch06	36081164 36081185 +	22	15.06561	7.030249	0.002932
SL3.0ch06	36081363 36081384 +	22	32.64381	3.118511	0.005441
SL3.0ch06	36081835 36081856 +	22	23.74121	4.111891	0.003153
SL3.0ch06	36081836 36081857 +	22	38.69797	4.250987	0.000116
SL3.0ch06	36081837 36081858 +	22	29.5336	4.250751	0.000353
SL3.0ch06	36083045 36083066 +	22	349.1839	4.374451	1.99E-14
SL3.0ch06	36083071 36083092 +	22	27.54651	4.422507	0.000661
SL3.0ch06	36083108 36083129 +	22	21.44629	5.135715	0.004359
SL3.0ch06	36083112 36083133 +	22	61.37167	5.569366	8E-07
SL3.0ch06	36083121 36083142 +	22	74.1282	2.829466	0.000129
SL3.0ch06	36083126 36083147 +	22	22.15123	3.818622	0.004809
SL3.0ch06	36083152 36083173 +	22	22.83211	6.201606	0.007901
SL3.0ch06	36083159 36083180 +	22	24.07996	7.7058	0.000374
SL3.0ch06	36083171 36083192 +	22	45.31586	6.179523	4.86E-05
SL3.0ch06	36083172 36083193 +	22	73.18318	5.270679	4.41E-09

SL3.0ch06	36083178	36083199	+	22	34.47274	3.908889	0.000152
SL3.0ch06	36083246	36083267	+	22	74.42764	2.565277	0.008455
SL3.0ch06	36083449	36083470	+	22	44.79521	5.549823	1.4E-05
SL3.0ch06	36083452	36083473	+	22	39.73392	5.983701	0.000247
SL3.0ch06	36083547	36083568	+	22	31.55424	2.833889	0.0076
SL3.0ch06	36083554	36083575	+	22	25.42304	6.353495	0.004868
SL3.0ch06	36083607	36083628	+	22	51.2847	4.910295	1.73E-05
SL3.0ch06	36083649	36083670	+	22	14.23406	6.943501	0.005178
SL3.0ch06	36083650	36083671	+	22	166.9604	4.223354	1.25E-10
SL3.0ch06	36083650	36083672	+	23	34.8472	4.459118	5.57E-05
SL3.0ch06	36083651	36083672	+	22	77.87733	4.87742	3.36E-08
SL3.0ch06	36083661	36083682	+	22	317.3326	4.056816	2.47E-15
SL3.0ch06	36083662	36083683	+	22	51.58368	3.224857	0.000118
SL3.0ch06	36083759	36083780	+	22	99.7559	6.345883	1.91E-10
SL3.0ch06	36083763	36083785	+	23	17.28814	7.236704	0.001799
SL3.0ch06	36083764	36083785	+	22	39.90737	5.422707	2.68E-05
SL3.0ch06	36083944	36083965	+	22	14.6826	6.990682	0.003426
SL3.0ch06	36084187	36084208	+	22	25.66414	4.725699	0.001121
SL3.0ch06	36084194	36084215	+	22	31.00093	3.523651	0.000813
SL3.0ch06	36084196	36084217	+	22	62.58191	3.704573	4.03E-06
SL3.0ch06	36084197	36084218	+	22	27.8261	5.466061	0.001074
SL3.0ch06	36084304	36084325	+	22	24.44009	3.631125	0.003004
SL3.0ch06	36084313	36084334	+	22	42.90337	3.25237	0.000206
SL3.0ch06	36084314	36084335	+	22	36.08813	5.272431	5.62E-05
SL3.0ch06	36084325	36084346	+	22	58.65695	4.752785	1.56E-07
SL3.0ch06	36084327	36084348	+	22	25.36549	3.650547	0.002645
SL3.0ch06	36084328	36084349	+	22	391.6718	2.011701	0.001241
SL3.0ch06	36084329	36084350	+	22	25.17306	6.339098	0.005651
SL3.0ch06	36084343	36084365	+	23	42.43832	8.526688	1.96E-05
SL3.0ch06	36085677	36085698	+	22	39.73695	3.067233	0.001955
SL3.0ch06	36086038	36086059	+	22	35.12689	3.604649	0.000329
SL3.0ch06	36086049	36086070	+	22	32.94852	5.711815	0.000485
SL3.0ch06	36086058	36086079	+	22	11.3156	6.618859	0.00965
SL3.0ch06	36570632	36570655	+	24	15.76092	7.100719	0.002366
SL3.0ch06	36620906	36620927	-	22	12.5743	6.769606	0.006187
SL3.0ch06	37452055	37452077	-	23	64.1882	3.188966	2.31E-05
SL3.0ch06	38338187	38338210	-	24	146.2228	10.31266	1.33E-08
SL3.0ch06	38338190	38338213	+	24	16.78254	7.19227	0.001813
SL3.0ch06	38338192	38338212	+	21	12.41961	6.757125	0.006209
SL3.0ch06	38338192	38338215	+	24	116.9286	9.991986	8.06E-08
SL3.0ch06	38338193	38338216	-	24	28.27368	6.509587	0.003129
SL3.0ch06	38338193	38338216	+	24	52.11126	8.828048	9.83E-06
SL3.0ch06	38693680	38693703	+	24	100.8692	2.687464	2.94E-05
SL3.0ch06	39116080	39116103	+	24	38.22596	8.371384	4.84E-05
SL3.0ch06	40831889	40831912	+	24	58.72386	2.439994	0.006358
SL3.0ch06	40831895	40831918	+	24	343.5549	1.853792	0.00346
SL3.0ch06	40831896	40831918	+	23	346.8532	2.125104	0.000151
SL3.0ch06	40899507	40899528	+	22	15.05552	7.02378	0.0043
SL3.0ch06	41083403	41083426	+	24	101.6147	2.184172	0.004316

SL3.0ch06	41121777	41121800	+	24	74.70531	2.590812	0.002528
SL3.0ch06	41929774	41929797	-	24	19.38212	4.405864	0.006822
SL3.0ch06	41929785	41929808	+	24	38.66393	3.27912	0.001274
SL3.0ch06	41929792	41929815	+	24	92.47225	3.038019	6.12E-05
SL3.0ch06	43527870	43527893	+	24	32.80329	3.079617	0.004712
SL3.0ch06	43543219	43543241	-	23	22.54468	4.127124	0.003226
SL3.0ch06	44746427	44746450	-	24	139.9574	1.963346	0.001719
SL3.0ch06	45161959	45161982	+	24	23.10588	7.652018	0.000555
SL3.0ch06	47274789	47274812	-	24	252.4738	1.783218	0.004775
SL3.0ch06	49177528	49177549	-	22	16.33236	7.145261	0.002262
SL3.0ch06	49177799	49177820	-	22	31.47186	4.341055	0.000187
SL3.0ch06	49177912	49177933	-	22	23.22892	4.511401	0.004919
SL3.0ch06	49177915	49177936	-	22	755.4181	3.739594	8.06E-08
SL3.0ch06	49177916	49177937	-	22	584.179	4.384561	9.99E-14
SL3.0ch06	49177917	49177938	-	22	65.50662	4.452644	2.91E-06
SL3.0ch06	49177994	49178015	-	22	40.61899	5.444364	2.16E-05
SL3.0ch06	49180487	49180508	-	22	22.7626	4.551883	0.00279
SL3.0ch06	49180507	49180528	-	22	24.78	4.674588	0.001312
SL3.0ch06	49180593	49180614	-	22	54.96257	4.818388	4.4E-07
SL3.0ch06	49180597	49180618	-	22	12.6169	6.773782	0.006115
SL3.0ch06	49180672	49180693	-	22	44.3612	5.13293	4.46E-06
SL3.0ch06	49180674	49180695	-	22	31.79332	4.095786	0.000209
SL3.0ch06	49180675	49180696	-	22	110.1627	5.677676	7.57E-12
SL3.0ch06	49180676	49180697	-	22	189.1655	4.492382	1.02E-13
SL3.0ch06	49180683	49180704	-	22	19.53142	7.406014	0.000923
SL3.0ch06	49180685	49180706	-	22	42.04068	7.080722	0.000706
SL3.0ch06	49180686	49180707	-	22	33.91685	4.191292	0.000158
SL3.0ch06	49180687	49180708	-	22	34.66525	5.832951	0.000319
SL3.0ch06	49180688	49180709	-	22	95.01714	6.683127	4.93E-08
SL3.0ch06	49180689	49180710	-	22	95.38811	4.28498	9.32E-09
SL3.0ch06	49181210	49181231	-	22	27.0383	4.037145	0.001536
SL3.0ch06	49181212	49181233	-	22	51.91898	3.992067	1E-05
SL3.0ch06	49181214	49181235	-	22	29.16891	4.506235	0.00053
SL3.0ch07	2014634	2014657	+	24	22.44695	3.803569	0.003301
SL3.0ch07	2848981	2849004	-	24	161.4022	2.011181	0.00572
SL3.0ch07	4229228	4229249	+	22	54.92207	4.303384	2.09E-06
SL3.0ch07	5104834	5104857	-	24	26.39004	6.411189	0.004184
SL3.0ch07	5633586	5633608	-	23	24.33131	3.660594	0.002601
SL3.0ch07	6908221	6908242	+	22	23.68849	4.238368	0.00279
SL3.0ch07	7663574	7663597	+	24	64.82356	2.59243	0.000259
SL3.0ch07	7725792	7725813	+	22	20.83687	3.95637	0.007501
SL3.0ch07	9211168	9211189	-	22	34.55565	4.185723	0.000314
SL3.0ch07	14793506	14793527	+	22	33.60413	3.678814	0.000268
SL3.0ch07	46301552	46301573	+	22	27.99851	5.474624	0.001299
SL3.0ch07	47016124	47016145	+	22	23.87441	6.232466	0.007013
SL3.0ch07	47734443	47734464	+	22	55.19121	4.693722	1.03E-06
SL3.0ch07	56869688	56869711	+	24	29.97133	8.025709	0.000118
SL3.0ch07	58302758	58302779	-	22	16.61006	7.168784	0.002081
SL3.0ch07	58305233	58305254	-	22	19.78127	4.329924	0.008074

SL3.0ch07	58305235	58305254	-	20	107.3706	4.593416	2.59E-09
SL3.0ch07	58305903	58305924	-	22	22.32763	6.161723	0.009411
SL3.0ch07	58721689	58721712	-	24	142.9606	2.003509	0.001918
SL3.0ch07	59121830	59121853	-	24	192.6201	2.332846	3.88E-05
SL3.0ch07	59828033	59828056	+	24	247.1232	2.109914	0.000525
SL3.0ch07	61071607	61071630	-	24	185.0534	1.87895	0.006115
SL3.0ch07	62081106	62081129	+	24	59.85491	2.381043	0.009713
SL3.0ch07	62081108	62081131	+	24	85.06923	2.650491	0.00052
SL3.0ch07	62081114	62081137	+	24	41.16133	2.689716	0.003656
SL3.0ch07	62081115	62081137	+	23	28.45832	2.814212	0.009983
SL3.0ch07	62432238	62432259	-	22	326.7983	2.696589	0.004014
SL3.0ch07	66354883	66354905	+	23	140.1982	1.988813	0.001507
SL3.0ch07	66607526	66607549	+	24	366.1978	1.913541	0.006115
SL3.0ch07	66636712	66636734	-	23	68.1756	2.650449	0.000335
SL3.0ch07	66690440	66690463	+	24	198.9917	2.560017	0.009463
SL3.0ch07	66690441	66690464	+	24	21.88172	5.067229	0.004214
SL3.0ch07	66690441	66690463	+	23	23.02068	5.139753	0.003639
SL3.0ch07	66690443	66690466	-	24	20.32021	4.328077	0.007438
SL3.0ch07	66690444	66690467	-	24	26.67333	6.404072	0.004754
SL3.0ch07	66690451	66690474	+	24	95.20409	3.384588	3.01E-05
SL3.0ch07	66690453	66690476	+	24	20.28312	3.924571	0.006382
SL3.0ch07	66690456	66690478	+	23	97.63868	2.401111	0.008113
SL3.0ch07	66690456	66690479	+	24	395.9071	2.655922	0.001681
SL3.0ch07	66690457	66690479	+	23	76.75613	3.006295	0.002789
SL3.0ch07	66690457	66690477	+	21	29.29081	3.769661	0.004985
SL3.0ch07	66690459	66690482	+	24	110.0992	3.522366	2.92E-05
SL3.0ch07	66691533	66691556	+	24	52.44756	3.275873	2.79E-05
SL3.0ch07	67023294	67023317	+	24	58.09584	2.414622	0.00872
SL3.0ch07	67418081	67418104	+	24	26.74661	4.11353	0.001565
SL3.0ch07	67418093	67418116	+	24	107.5853	2.572964	0.002566
SL3.0ch07	67832955	67832978	+	24	11.60018	6.663066	0.00905
SL3.0ch07	67832961	67832984	+	24	54.44075	7.458977	0.000195
SL3.0ch07	67832966	67832989	+	24	14.77188	7.008199	0.003869
SL3.0ch07	67832966	67832989	-	24	16.69724	7.174146	0.002293
SL3.0ch07	67832971	67832994	-	24	19.06484	7.374113	0.001304
SL3.0ch07	67832973	67832996	+	24	12.12378	6.71512	0.007502
SL3.0ch07	67832975	67832998	-	24	13.93669	6.914925	0.004316
SL3.0ch07	67832977	67833000	+	24	30.27635	8.040168	0.000116
SL3.0ch07	67832979	67833001	-	23	26.8481	7.859699	0.000316
SL3.0ch07	67832979	67833002	-	24	272.5983	11.21034	2.58E-10
SL3.0ch08	864961	864984	+	24	72.70562	2.443501	0.003241
SL3.0ch08	1480604	1480627	+	24	35.82985	4.889966	5.2E-05
SL3.0ch08	1688919	1688942	+	24	33.82233	5.755016	0.000268
SL3.0ch08	1688932	1688955	-	24	23.23919	5.257628	0.002966
SL3.0ch08	1979536	1979559	+	24	258.2481	1.623988	0.00872
SL3.0ch08	2162109	2162130	+	22	11.26455	6.610013	0.009548
SL3.0ch08	2416411	2416432	+	22	11.7858	6.676383	0.007814
SL3.0ch08	2909579	2909601	+	23	64.63305	2.928172	3.53E-05
SL3.0ch08	8100141	8100162	+	22	12.8685	6.8039	0.008428

SL3.0ch08	11914053	11914074	+	22	308.5501	5.203107	1.78E-16
SL3.0ch08	14341864	14341885	-	22	94.60539	3.362552	1.8E-05
SL3.0ch08	14341864	14341885	+	22	12.59478	6.768493	0.00664
SL3.0ch08	20446167	20446188	+	22	84.47969	5.658135	0.006115
SL3.0ch08	20470975	20470996	+	22	70.17432	5.048285	1.03E-07
SL3.0ch08	25144967	25144988	-	22	53.29406	4.204785	2.5E-06
SL3.0ch08	25731385	25731408	+	24	43.71807	2.823787	0.001117
SL3.0ch08	29339471	29339492	-	22	47.37421	3.625578	1.3E-05
SL3.0ch08	29339736	29339757	+	22	15.99159	7.118758	0.002195
SL3.0ch08	29339738	29339759	+	22	25.92834	5.359533	0.002025
SL3.0ch08	35144954	35144975	-	22	26.60988	5.354476	0.001432
SL3.0ch08	42830334	42830355	-	22	54.81772	5.51547	4.12E-06
SL3.0ch08	50181105	50181127	-	23	30.31608	4.604153	0.000257
SL3.0ch08	50181105	50181126	-	22	80.41121	6.439492	2.66E-08
SL3.0ch08	50181126	50181147	-	22	32.11096	8.124099	8.03E-05
SL3.0ch08	56492763	56492786	-	24	50.87501	2.262227	0.006618
SL3.0ch08	57541215	57541238	+	24	19.28776	4.982411	0.007561
SL3.0ch08	57541217	57541240	-	24	15.15972	7.046833	0.003026
SL3.0ch08	57541226	57541249	-	24	40.85645	3.452665	0.000138
SL3.0ch08	58668178	58668199	+	22	79.19622	4.30392	1.15E-08
SL3.0ch08	59063406	59063429	+	24	161.051	2.044113	0.001621
SL3.0ch08	59063406	59063427	+	22	31.49807	2.94672	0.0043
SL3.0ch08	59159047	59159068	+	22	21.69719	7.557455	0.000605
SL3.0ch08	59159252	59159273	+	22	218.8442	3.39069	5.07E-08
SL3.0ch08	61217633	61217654	+	22	55.57223	7.467078	0.000183
SL3.0ch08	61217674	61217695	+	22	13.57782	6.87966	0.006255
SL3.0ch08	61217763	61217784	+	22	51.13827	3.771282	1.23E-05
SL3.0ch08	61217780	61217801	+	22	120.1159	3.378988	9.22E-07
SL3.0ch08	61217954	61217976	-	23	22.61806	5.163886	0.003057
SL3.0ch08	61217969	61217990	-	22	60.60062	3.182542	7.94E-05
SL3.0ch08	61218313	61218334	+	22	20.92309	3.607608	0.009948
SL3.0ch08	61218499	61218520	-	22	44.46249	3.763466	1.59E-05
SL3.0ch08	62260342	62260364	-	23	28.87457	6.544189	0.003054
SL3.0ch08	62260343	62260364	-	22	76.80348	7.954944	3.05E-05
SL3.0ch08	63197901	63197924	+	24	43.76947	2.965172	0.000357
SL3.0ch08	63839790	63839813	-	24	17.3552	7.236127	0.001621
SL3.0ch08	63839791	63839814	+	24	24.46668	5.232369	0.002495
SL3.0ch08	63839791	63839814	-	24	33.0003	6.714447	0.002031
SL3.0ch08	63839796	63839819	-	24	53.9504	7.42801	0.000204
SL3.0ch08	63839798	63839821	-	24	24.06057	3.776876	0.006018
SL3.0ch08	63839798	63839819	-	22	25.77985	6.349943	0.005409
SL3.0ch08	63839799	63839822	-	24	24.20249	4.592369	0.002688
SL3.0ch08	63839800	63839822	-	23	29.88796	4.916345	0.000353
SL3.0ch08	63839806	63839829	-	24	22.74662	7.632673	0.000487
SL3.0ch08	63839808	63839831	-	24	11.89357	6.699986	0.008345
SL3.0ch08	64116930	64116953	+	24	41.13332	2.695484	0.006298
SL3.0ch08	64198878	64198899	+	22	15.54585	7.072192	0.002827
SL3.0ch08	65340625	65340648	+	24	170.8056	2.446946	1.73E-05
SL3.0ch08	65340626	65340649	+	24	82.54886	3.018976	1.26E-05

SL3.0ch09	334402	334425 +	24	45.9078	2.817406	0.004163
SL3.0ch09	334405	334428 +	24	26.81365	3.558891	0.001795
SL3.0ch09	940870	940893 +	24	18.74414	7.34863	0.001076
SL3.0ch09	940874	940897 -	24	21.68853	4.157694	0.003803
SL3.0ch09	940888	940911 +	24	26.94656	3.310221	0.008473
SL3.0ch09	1014513	1014535 +	23	36.3508	3.389463	0.001623
SL3.0ch09	1677657	1677678 +	22	48.98955	2.498853	0.003863
SL3.0ch09	1677657	1677676 +	20	40.57641	2.784768	0.001763
SL3.0ch09	2056779	2056802 -	24	47.25986	2.294435	0.007451
SL3.0ch09	2058491	2058514 +	24	25.469	4.041453	0.002566
SL3.0ch09	3883714	3883737 +	24	58.76551	2.144576	0.005968
SL3.0ch09	3883873	3883896 -	24	29.49516	3.33628	0.004182
SL3.0ch09	4210085	4210106 -	22	99.70723	4.874521	7.98E-10
SL3.0ch09	4210095	4210116 -	22	44.00608	3.059	0.00182
SL3.0ch09	4210096	4210117 -	22	286.2255	3.106215	4.42E-05
SL3.0ch09	8736759	8736782 -	24	114.298	1.968028	0.002297
SL3.0ch09	9222388	9222411 -	24	53.13329	2.468077	0.001398
SL3.0ch09	9222389	9222411 -	23	35.48353	2.695794	0.008087
SL3.0ch09	9222397	9222420 -	24	119.0252	2.963353	1.75E-06
SL3.0ch09	9619919	9619941 +	23	703.566	2.044845	9.7E-05
SL3.0ch09	9619920	9619943 -	24	23.3637	3.312582	0.007156
SL3.0ch09	9805981	9806002 +	22	37.34706	5.848692	0.000257
SL3.0ch09	9805982	9806003 -	22	28.33724	3.387287	0.001902
SL3.0ch09	9805983	9806004 -	22	128.1298	4.212483	1.41E-11
SL3.0ch09	9805986	9806007 -	22	21.82899	3.455798	0.007883
SL3.0ch09	9805996	9806017 -	22	36.38095	5.903438	0.000217
SL3.0ch09	9806069	9806090 +	22	22.85865	7.632402	0.000677
SL3.0ch09	9806071	9806092 -	22	37.0415	6.875485	0.001177
SL3.0ch09	9816346	9816367 -	22	23.12886	5.197288	0.002682
SL3.0ch09	9816373	9816394 +	22	26.28996	6.404809	0.004177
SL3.0ch09	9816376	9816397 +	22	269.8171	2.489873	3.48E-05
SL3.0ch09	9816536	9816557 +	22	58.37298	3.190209	0.000347
SL3.0ch09	9816541	9816562 -	22	21.23059	7.525399	0.001142
SL3.0ch09	9816542	9816563 -	22	67.87301	5.475806	1.88E-07
SL3.0ch09	9816544	9816565 -	22	33.43477	3.730198	0.000563
SL3.0ch09	24094590	24094611 -	22	33.10538	3.723261	0.001861
SL3.0ch09	32043201	32043224 +	24	90.802	2.424303	0.001902
SL3.0ch09	53053471	53053492 -	22	19.98673	7.436964	0.000879
SL3.0ch09	54769593	54769616 +	24	36.12599	5.853046	0.00018
SL3.0ch09	58749564	58749585 +	22	20.59975	5.023382	0.00548
SL3.0ch09	62132704	62132727 -	24	175.1948	2.175659	0.001208
SL3.0ch09	62157356	62157377 +	22	31.81728	3.020464	0.008512
SL3.0ch09	62157418	62157439 -	22	25.24177	3.34652	0.00872
SL3.0ch09	62677975	62677997 -	23	93.11326	1.942195	0.004961
SL3.0ch09	62677976	62677999 +	24	45.53869	2.965894	0.000478
SL3.0ch09	64292020	64292043 +	24	57.29974	2.438545	0.002231
SL3.0ch09	65990829	65990850 -	22	28.72766	6.527481	0.004022
SL3.0ch09	65991015	65991036 -	22	13.45523	6.865578	0.004818
SL3.0ch09	67840006	67840029 +	24	42.41355	4.529303	6.68E-05

SL3.0ch09	68055445	68055468	+	24	102.3484	2.135686	0.006454
SL3.0ch09	69240049	69240070	-	22	44.62538	3.395794	9.34E-05
SL3.0ch09	69444921	69444944	-	24	37.86764	2.803808	0.002598
SL3.0ch09	69474433	69474456	+	24	78.50016	2.2547	0.002825
SL3.0ch09	70305604	70305627	-	24	13.12128	6.831014	0.006108
SL3.0ch09	70397757	70397778	+	22	55.10338	3.753832	4.26E-05
SL3.0ch09	71463018	71463040	+	23	106.6654	1.877438	0.009926
SL3.0ch09	71806667	71806690	-	24	15.38958	7.066394	0.002645
SL3.0ch09	71881170	71881191	+	22	70.65108	2.79655	0.000942
SL3.0ch10	210832	210855	-	24	47.79336	2.77909	0.007585
SL3.0ch10	721070	721093	-	24	18.56975	20.17292	0.001517
SL3.0ch10	791470	791493	-	24	32.68959	2.859293	0.00455
SL3.0ch10	841992	842015	-	24	37.27798	4.334731	3.99E-05
SL3.0ch10	841992	842014	-	23	84.1982	4.418742	2.06E-08
SL3.0ch10	841993	842016	-	24	96.54495	4.83138	3.76E-11
SL3.0ch10	841993	842015	-	23	344.6099	5.292578	6.76E-20
SL3.0ch10	841994	842016	-	23	66.69906	5.224443	2.53E-07
SL3.0ch10	842007	842029	+	23	21.29317	5.125366	0.004745
SL3.0ch10	842007	842030	-	24	27.12035	7.882951	0.00019
SL3.0ch10	882233	882255	-	23	26.73338	4.72716	0.001777
SL3.0ch10	882233	882254	-	22	59.53242	5.597984	2.57E-06
SL3.0ch10	1700099	1700121	+	23	1702.415	2.237248	8.69E-05
SL3.0ch10	2151160	2151183	-	24	137.5983	1.990916	0.00197
SL3.0ch10	2457014	2457037	-	24	24.13141	3.83294	0.002848
SL3.0ch10	2675261	2675284	+	24	68.88573	2.911451	6.27E-05
SL3.0ch10	2675264	2675287	+	24	51.07964	2.839627	0.000894
SL3.0ch10	4125862	4125883	-	22	14.88111	7.008167	0.003575
SL3.0ch10	4126253	4126274	-	22	24.14664	3.830373	0.003025
SL3.0ch10	10829334	10829357	-	24	14.65611	6.993743	0.003639
SL3.0ch10	15696119	15696140	+	22	12.29696	6.730837	0.009319
SL3.0ch10	15696129	15696150	+	22	29.10149	4.4026	0.001737
SL3.0ch10	23475114	23475135	+	22	15.46789	7.065693	0.002827
SL3.0ch10	23475115	23475135	+	21	12.18807	6.721349	0.0076
SL3.0ch10	24113353	24113374	+	22	184.7421	4.30972	6.91E-11
SL3.0ch10	24178076	24178097	-	22	115.3259	7.537244	9.33E-08
SL3.0ch10	36632121	36632142	+	22	22.21186	4.608435	0.003085
SL3.0ch10	36633036	36633057	-	22	56.26709	7.485291	0.000164
SL3.0ch10	36633039	36633060	-	22	24.23679	7.721326	0.000341
SL3.0ch10	51370811	51370832	-	22	40.98217	4.408728	1.96E-05
SL3.0ch10	51478445	51478468	+	24	72.67559	2.190759	0.006865
SL3.0ch10	51689615	51689638	-	24	57.79972	3.295653	7.57E-05
SL3.0ch10	54546156	54546177	-	22	27.74073	3.786761	0.002253
SL3.0ch10	54546159	54546180	-	22	21.26962	5.01556	0.006365
SL3.0ch10	56568041	56568062	+	22	161.0359	4.8104	3.57E-09
SL3.0ch10	56850639	56850660	+	22	68.72405	5.487905	4.24E-08
SL3.0ch10	58229647	58229670	+	24	48.6737	3.454041	0.001046
SL3.0ch10	58229651	58229674	+	24	158.549	2.957831	0.001309
SL3.0ch10	58557990	58558013	-	24	40.72016	2.632536	0.003686
SL3.0ch10	59700383	59700406	-	24	19.48821	4.412476	0.006415

SL3.0ch10	59774638	59774661	+	24	64.73456	6.066034	2.13E-07
SL3.0ch10	60451489	60451512	-	24	15.86828	7.114305	0.002885
SL3.0ch10	60451492	60451515	-	24	66.87697	9.184442	4.29E-06
SL3.0ch10	61374925	61374948	-	24	133.7936	4.130945	3.26E-09
SL3.0ch10	61872815	61872838	-	24	29.19844	7.98635	0.000196
SL3.0ch10	63338512	63338535	+	24	603.0439	3.05743	1.14E-08
SL3.0ch10	63338513	63338535	+	23	119.6891	3.527565	2.48E-08
SL3.0ch10	63338520	63338543	-	24	34.97921	2.59144	0.006
SL3.0ch10	63338520	63338542	-	23	41.32153	4.26571	4.31E-05
SL3.0ch10	63338521	63338544	-	24	22.94973	4.657249	0.002614
SL3.0ch10	64369452	64369475	-	24	351.8954	2.565045	8.53E-05
SL3.0ch10	64871346	64871369	-	24	61.26562	2.37856	0.002107
SL3.0ch11	871343	871366	+	24	20.34778	3.615955	0.009189
SL3.0ch11	871349	871370	+	22	71.04993	2.157622	0.006096
SL3.0ch11	912673	912694	-	22	19.45824	7.397854	0.001005
SL3.0ch11	1506788	1506811	-	24	41.07017	3.408653	0.000163
SL3.0ch11	2024278	2024299	+	22	165.5297	2.572841	9.19E-05
SL3.0ch11	2691018	2691039	+	22	23.18007	4.573107	0.002297
SL3.0ch11	2700179	2700199	-	21	15.56154	7.075493	0.002859
SL3.0ch11	2700483	2700504	+	22	11.70463	6.66743	0.008596
SL3.0ch11	2700484	2700504	+	21	12.5156	6.75796	0.007365
SL3.0ch11	2700490	2700511	+	22	29.5714	8.003686	0.000132
SL3.0ch11	2700491	2700511	+	21	17.27601	7.228392	0.001727
SL3.0ch11	2700776	2700796	+	21	17.50912	7.249145	0.001698
SL3.0ch11	2702043	2702064	-	22	12.0426	6.70618	0.007438
SL3.0ch11	2716560	2716580	+	21	23.88547	7.6951	0.000391
SL3.0ch11	2717201	2717221	-	21	12.60401	6.767103	0.007113
SL3.0ch11	2717673	2717693	-	21	12.50959	6.759874	0.006482
SL3.0ch11	2718100	2718121	+	22	29.80044	6.584505	0.00258
SL3.0ch11	2718102	2718122	+	21	13.24505	6.842838	0.005121
SL3.0ch11	2718107	2718128	-	22	14.52668	6.97702	0.003425
SL3.0ch11	2719521	2719541	+	21	24.41268	6.294386	0.006196
SL3.0ch11	2719523	2719544	+	22	12.21987	6.733897	0.006587
SL3.0ch11	2790141	2790164	-	24	191.8245	1.724331	0.009502
SL3.0ch11	2872027	2872048	+	22	35.11811	4.784274	0.000104
SL3.0ch11	2872034	2872054	+	21	24.82616	4.670542	0.001957
SL3.0ch11	3158811	3158832	+	22	32.50692	8.145459	8.78E-05
SL3.0ch11	3159015	3159036	+	22	33.7467	4.685659	0.000151
SL3.0ch11	3714551	3714574	+	24	36.75544	3.787796	0.002193
SL3.0ch11	4703214	4703237	-	24	29.76244	8.020289	0.000149
SL3.0ch11	5208426	5208449	-	24	18.20564	20.14091	0.001562
SL3.0ch11	5989654	5989677	-	24	23.83831	4.71848	0.003005
SL3.0ch11	5989672	5989695	+	24	248.1448	3.578681	2E-09
SL3.0ch11	7676426	7676449	-	24	141.5133	2.360499	0.00935
SL3.0ch11	7836476	7836497	+	22	40.70277	4.078564	0.000173
SL3.0ch11	7836561	7836582	+	22	167.6748	6.429072	6.62E-14
SL3.0ch11	8001771	8001792	+	22	71.54127	4.616667	2.32E-07
SL3.0ch11	8002810	8002831	+	22	11.67849	6.661538	0.008667
SL3.0ch11	8004877	8004898	+	22	36.48237	4.800354	0.000102

SL3.0ch11	8004878	8004899	+	22	34.11346	5.146829	0.000185
SL3.0ch11	8004881	8004902	+	22	45.50672	6.184508	6.12E-05
SL3.0ch11	8005003	8005024	+	22	13.92823	6.9121	0.004687
SL3.0ch11	8005223	8005245	+	23	22.90543	3.571382	0.004083
SL3.0ch11	8005565	8005587	+	23	36.16349	5.85861	0.000215
SL3.0ch11	17937709	17937729	+	21	28.17378	3.170179	0.008121
SL3.0ch11	21335168	21335189	-	22	12.002	6.699475	0.008041
SL3.0ch11	21335598	21335618	-	21	45.87213	3.409757	0.001849
SL3.0ch11	24565889	24565910	-	22	23.86534	7.691856	0.000442
SL3.0ch11	26376575	26376596	-	22	30.3812	6.614282	0.002381
SL3.0ch11	26376639	26376658	-	20	109.1445	4.778004	2.85E-11
SL3.0ch11	26376801	26376822	-	22	142.1867	4.413297	2.12E-11
SL3.0ch11	26376802	26376822	-	21	42.44378	3.320381	0.00208
SL3.0ch11	26376902	26376923	+	22	27.92142	4.409493	0.0005
SL3.0ch11	26376905	26376926	-	22	30.89519	4.50491	0.000605
SL3.0ch11	29661950	29661971	+	22	108.2015	4.066449	4.43E-09
SL3.0ch11	29661953	29661974	-	22	19.6403	7.411407	0.000959
SL3.0ch11	29662034	29662055	+	22	80.01059	4.410913	3.78E-08
SL3.0ch11	29662037	29662058	+	22	36.00199	4.464531	0.000243
SL3.0ch11	29662038	29662059	+	22	30.5771	4.575308	0.000445
SL3.0ch11	29662039	29662060	+	22	65.75756	3.081786	0.004553
SL3.0ch11	29662040	29662061	+	22	49.21488	4.401747	1.15E-05
SL3.0ch11	29662156	29662177	-	22	38.82661	2.577308	0.009042
SL3.0ch11	29662165	29662186	-	22	41.38103	6.048149	0.000103
SL3.0ch11	29662167	29662188	-	22	169.2119	5.495942	3.07E-16
SL3.0ch11	29662438	29662459	+	22	52.74647	8.84201	7.64E-06
SL3.0ch11	29662439	29662460	+	22	80.41872	7.017033	1.24E-06
SL3.0ch11	29662443	29662464	+	22	31.01414	6.642481	0.002428
SL3.0ch11	29662444	29662465	+	22	21.51889	4.562768	0.006604
SL3.0ch11	29662452	29662473	-	22	25.24168	4.653304	0.001735
SL3.0ch11	29662452	29662473	+	22	65.95366	6.698046	2.04E-06
SL3.0ch11	30866416	30866437	-	22	55.8433	5.432811	1.3E-06
SL3.0ch11	30866418	30866439	-	22	51.65119	3.655661	8.56E-05
SL3.0ch11	30866419	30866440	-	22	191.6568	5.796551	6.2E-16
SL3.0ch11	30866420	30866442	-	23	70.13993	4.124206	2.7E-07
SL3.0ch11	30868172	30868193	-	22	46.34265	3.436211	3.55E-05
SL3.0ch11	30868173	30868194	-	22	62.34494	6.648033	6.37E-06
SL3.0ch11	30868650	30868671	-	22	45.20188	2.548931	0.007833
SL3.0ch11	30868652	30868673	-	22	44.42474	6.191254	5.66E-05
SL3.0ch11	30868672	30868693	-	22	15.56119	7.082445	0.002481
SL3.0ch11	31208410	31208431	-	22	34.03623	6.774043	0.00185
SL3.0ch11	31208648	31208669	-	22	107.2992	3.232027	5.41E-06
SL3.0ch11	31208895	31208916	-	22	17.63967	7.253706	0.001765
SL3.0ch11	31209014	31209035	+	22	22.73612	4.589664	0.002498
SL3.0ch11	31209242	31209263	-	22	18.44753	7.324706	0.001173
SL3.0ch11	31209316	31209337	-	22	33.80244	5.704423	0.000415
SL3.0ch11	31209317	31209338	-	22	62.64573	4.162118	1.05E-05
SL3.0ch11	31209318	31209339	-	22	70.56308	4.579853	1.64E-08
SL3.0ch11	31209319	31209340	-	22	13.22136	6.843396	0.004868

SL3.0ch11	31209599	31209620	+	22	27.74085	4.884274	0.00053
SL3.0ch11	31209601	31209622	-	22	257.6607	2.26964	0.000197
SL3.0ch11	31691098	31691119	+	22	18.39775	4.278208	0.008325
SL3.0ch11	31691355	31691376	+	22	37.30375	3.014496	0.000903
SL3.0ch11	32085377	32085398	+	22	29.78753	4.948877	0.000335
SL3.0ch11	32085475	32085496	+	22	53.49038	5.806702	5.52E-06
SL3.0ch11	38030302	38030325	-	24	110.7015	2.632605	0.000278
SL3.0ch11	38430807	38430828	+	22	33.64015	6.723446	0.003717
SL3.0ch11	47489811	47489832	+	22	36.28783	3.707032	0.003397
SL3.0ch11	48570254	48570277	+	24	40.36914	2.860371	0.005534
SL3.0ch11	49660822	49660843	+	22	47.61012	5.268165	5.61E-06
SL3.0ch11	51679016	51679037	-	22	11.54948	6.644526	0.008909
SL3.0ch11	51679068	51679089	+	22	45.80299	3.270697	0.00013
SL3.0ch11	51679069	51679090	+	22	19.97928	3.900761	0.007117
SL3.0ch11	51679072	51679093	+	22	20.02643	5.036895	0.006103
SL3.0ch11	51679088	51679109	+	22	78.69995	2.655528	0.000177
SL3.0ch11	51679201	51679222	-	22	27.06107	3.750193	0.001475
SL3.0ch11	51679208	51679229	+	22	12.90306	6.807576	0.005455
SL3.0ch11	51679289	51679310	-	22	64.23912	3.948358	2.66E-06
SL3.0ch11	51679290	51679311	-	22	120.958	2.93146	5.5E-06
SL3.0ch11	52285810	52285833	-	24	137.4604	2.154502	0.005182
SL3.0ch11	52916208	52916231	+	24	304.0903	2.344219	9.53E-06
SL3.0ch11	52916209	52916231	+	23	105.1521	3.142489	5.11E-06
SL3.0ch11	53028693	53028716	-	24	114.6938	2.761448	2.87E-05
SL3.0ch11	53491629	53491652	+	24	47.003	2.585355	0.001649
SL3.0ch11	53491630	53491653	+	24	186.4155	2.481378	5.79E-06
SL3.0ch11	53491632	53491655	+	24	163.1734	2.911574	3.25E-08
SL3.0ch11	53491633	53491655	+	23	285.7693	2.147326	0.000325
SL3.0ch11	53491633	53491653	+	21	213.736	2.496959	1.15E-05
SL3.0ch11	53491633	53491656	+	24	255.5132	3.420718	1.56E-11
SL3.0ch11	53491636	53491659	+	24	56.33094	3.632249	7.63E-05
SL3.0ch11	53491639	53491662	+	24	39.61669	3.479139	0.003253
SL3.0ch11	53491646	53491669	-	24	32.88601	3.381297	0.001218
SL3.0ch11	53491648	53491671	-	24	34.7803	3.413346	0.00038
SL3.0ch11	53491648	53491669	-	22	29.00453	3.478531	0.00246
SL3.0ch11	53776821	53776844	-	24	55.85785	2.558568	0.002033
SL3.0ch11	53787955	53787978	-	24	61.79424	2.364603	0.004182
SL3.0ch11	54828515	54828538	+	24	265.6908	1.714398	0.002606
SL3.0ch11	54828516	54828538	+	23	78.04862	2.721556	5.55E-05
SL3.0ch11	54828517	54828540	+	24	29.36072	3.211681	0.0029
SL3.0ch11	54828526	54828549	-	24	83.35455	2.232528	0.002028
SL3.0ch11	55497112	55497135	-	24	58.45635	2.4405	0.004483
SL3.0ch11	55594246	55594267	-	22	30.92968	3.480045	0.002859
SL3.0ch11	56003394	56003417	-	24	1018.88	2.868677	5.09E-10
SL3.0ch12	440594	440617	-	24	11.70218	6.66133	0.009705
SL3.0ch12	732628	732651	-	24	20.67809	7.494633	0.001745
SL3.0ch12	1443398	1443420	+	23	39.19774	6.961011	0.000942
SL3.0ch12	1443466	1443487	+	22	212.7151	3.30065	7.92E-07
SL3.0ch12	1443826	1443848	+	23	77.04983	5.631294	2.99E-09

SL3.0ch12	1443827	1443848	+	22	24.03538	7.704417	0.000357
SL3.0ch12	2245054	2245077	-	24	76.3693	2.828393	0.008618
SL3.0ch12	2245058	2245081	+	24	45.01964	3.21392	0.001347
SL3.0ch12	2245073	2245096	-	24	28.26522	3.811177	0.004474
SL3.0ch12	2245079	2245101	-	23	39.94013	3.84517	0.002462
SL3.0ch12	2506206	2506227	-	22	200.9065	1.937839	0.003154
SL3.0ch12	2982837	2982859	-	23	42.59586	2.528125	0.003447
SL3.0ch12	4729144	4729165	-	22	33.89538	4.414033	0.000904
SL3.0ch12	4729607	4729628	-	22	48.71001	5.301341	6.62E-06
SL3.0ch12	4729608	4729629	-	22	68.68959	5.848707	1.1E-06
SL3.0ch12	4738458	4738478	-	21	21.85692	5.163822	0.006621
SL3.0ch12	4738469	4738490	-	22	74.78422	9.342564	1.24E-06
SL3.0ch12	4739289	4739310	-	22	19.85863	4.965156	0.00872
SL3.0ch12	5927659	5927682	+	24	24.3875	3.334271	0.008518
SL3.0ch12	6977056	6977077	-	22	69.73951	4.137482	6.97E-07
SL3.0ch12	6977057	6977078	-	22	92.18349	4.590608	1.35E-07
SL3.0ch12	6977058	6977079	-	22	52.85439	3.772325	0.000245
SL3.0ch12	6977059	6977080	-	22	55.88378	3.752234	3.47E-05
SL3.0ch12	6977060	6977081	-	22	69.03391	4.878755	1.62E-07
SL3.0ch12	6977061	6977082	-	22	84.51379	4.8463	1.4E-09
SL3.0ch12	6977062	6977083	-	22	39.5228	3.721723	0.000452
SL3.0ch12	6977093	6977114	-	22	40.43863	3.400037	0.000586
SL3.0ch12	6977147	6977168	-	22	35.55442	5.158708	0.000191
SL3.0ch12	9673030	9673051	+	22	50.22766	6.368003	1.97E-05
SL3.0ch12	9673031	9673052	+	22	75.49951	5.659654	2.48E-08
SL3.0ch12	9673032	9673053	+	22	102.19	5.761049	2.71E-11
SL3.0ch12	9673033	9673054	+	22	52.05697	5.054128	6.6E-07
SL3.0ch12	9673087	9673108	+	22	59.61231	5.223299	1.8E-07
SL3.0ch12	9673148	9673169	-	22	15.07565	7.028814	0.003515
SL3.0ch12	9673170	9673191	-	22	27.34917	6.434827	0.003717
SL3.0ch12	9673172	9673193	-	22	23.61221	7.680307	0.000377
SL3.0ch12	9673173	9673194	-	22	91.09965	3.498741	1.48E-07
SL3.0ch12	9673173	9673193	-	21	164.3129	5.170765	1.13E-14
SL3.0ch12	9673322	9673343	-	22	42.81119	5.485781	1.97E-05
SL3.0ch12	9673412	9673433	+	22	14.30727	6.95767	0.004184
SL3.0ch12	9673413	9673434	-	22	260.9291	5.138933	6.3E-15
SL3.0ch12	9673415	9673436	-	22	587.4711	4.895734	6.15E-12
SL3.0ch12	9673447	9673468	+	22	20.63908	4.448326	0.005582
SL3.0ch12	9673453	9673474	-	22	26.94725	4.07351	0.001009
SL3.0ch12	9673458	9673479	-	22	23.14471	6.216175	0.007179
SL3.0ch12	10046267	10046289	+	23	39.8345	3.039119	0.000894
SL3.0ch12	10046268	10046289	+	22	56.98822	5.938741	3.21E-06
SL3.0ch12	10046522	10046543	+	22	32.43419	5.691614	0.00065
SL3.0ch12	10046523	10046544	+	22	36.61288	6.883649	0.001184
SL3.0ch12	10046524	10046545	+	22	33.59069	8.187699	7.55E-05
SL3.0ch12	10046891	10046912	+	22	64.29003	4.675688	9.39E-08
SL3.0ch12	10046892	10046913	+	22	34.97687	5.799647	0.000382
SL3.0ch12	10047941	10047962	+	22	32.75337	5.710023	0.000435
SL3.0ch12	10048098	10048118	+	21	43.25793	4.217829	2.31E-05

SL3.0ch12	10048098	10048120	+	23	33.68975	4.493437	0.000356
SL3.0ch12	10048098	10048119	+	22	297.9469	5.16573	1.04E-16
SL3.0ch12	10048098	10048117	+	20	34.31255	6.793308	0.001764
SL3.0ch12	10048111	10048132	+	22	25.58363	5.34448	0.003055
SL3.0ch12	10642937	10642958	+	22	183.246	2.539992	0.000657
SL3.0ch12	10642964	10642985	+	22	24.70677	5.213921	0.006232
SL3.0ch12	10643192	10643213	+	22	31.30701	4.614755	0.000215
SL3.0ch12	10643194	10643215	+	22	171.6228	2.660497	0.00192
SL3.0ch12	27465991	27466012	-	22	44.45452	3.654578	0.000541
SL3.0ch12	31007286	31007307	+	22	82.02055	4.008358	6.14E-06
SL3.0ch12	56375300	56375323	-	24	41.56366	7.048534	0.000599
SL3.0ch12	56792053	56792074	-	22	31.33105	4.610876	0.000673
SL3.0ch12	56792346	56792367	-	22	12.44131	6.758756	0.006556
SL3.0ch12	56792439	56792460	-	22	34.98442	8.245532	6E-05
SL3.0ch12	56792451	56792472	+	22	77.17698	6.293931	6.79E-07
SL3.0ch12	56792452	56792473	-	22	217.8649	4.53663	2.08E-10
SL3.0ch12	56792453	56792474	-	22	72.87215	4.835601	1.19E-08
SL3.0ch12	56792769	56792790	-	22	171.639	6.300479	3.35E-14
SL3.0ch12	56792780	56792801	-	22	65.6207	7.710369	6.73E-05
SL3.0ch12	56798475	56798497	-	23	16.79211	7.184643	0.001966
SL3.0ch12	56798484	56798505	-	22	98.01019	8.306183	9.98E-06
SL3.0ch12	59661632	59661653	-	22	18.20953	7.298576	0.001698
SL3.0ch12	61202877	61202900	-	24	193.8629	2.115342	0.001015
SL3.0ch12	62024913	62024934	+	22	75.74973	2.785277	0.000548
SL3.0ch12	62027711	62027732	+	22	23.4807	6.237419	0.006837
SL3.0ch12	62164060	62164083	+	24	99.70784	2.205883	0.004123
SL3.0ch12	63774745	63774768	-	24	28.33177	5.498392	0.000925
SL3.0ch12	63774754	63774777	-	24	17.85597	7.280185	0.001377
SL3.0ch12	63774756	63774779	-	24	87.10823	5.358482	2.33E-10
SL3.0ch12	63854971	63854994	+	24	153.3812	2.479721	3.99E-05
SL3.0ch12	64028775	64028796	+	22	35.34894	6.832703	0.001398
SL3.0ch12	64029425	64029446	+	22	31.14203	5.054252	0.000287
SL3.0ch12	65004637	65004660	+	24	127.3345	4.18355	1.99E-08
SL3.0ch12	65601325	65601348	-	24	48.40852	2.53079	0.002233
SL3.0ch12	66047917	66047940	-	24	36.33127	4.043103	6.27E-05
SL3.0ch12	67048249	67048272	+	24	87.21085	5.240638	5.1E-10
SL3.0ch12	67048250	67048273	+	24	19.64921	7.418285	0.00094
SL3.0ch12	67048253	67048276	+	24	19.72361	7.427862	0.000975
SL3.0ch12	67048257	67048280	+	24	13.59515	6.889057	0.004404
SL3.0ch12	67048262	67048285	+	24	35.47886	4.729894	8.24E-05
SL3.0ch12	67206263	67206286	+	24	136.2171	1.932713	0.005234
SL3.0ch12	67214125	67214147	+	23	16.92082	7.204963	0.002498
SL3.0ch12	67279362	67279385	+	24	18.30461	4.854816	0.009253
SL3.0ch12	67279370	67279393	-	24	37.38496	3.028022	0.003444
SL3.0ch12	67449915	67449936	-	22	60.90656	2.498744	0.00501
SL3.0ch12	67450192	67450215	-	24	25.76607	7.813873	0.000374
SL3.0ch12	67450196	67450217	-	22	19048.56	1.535832	0.005122
SL3.0ch12	67450238	67450260	-	23	21.45642	5.026936	0.005379
SL3.0ch12	67450239	67450260	-	22	30.1386	5.584842	0.000686

SL3.0ch12	67450494 67450515 -	22	26.14815	7.828051	0.000326
SL3.0ch12	67450517 67450537 -	21	21.96304	5.123132	0.00572
SL3.0ch12	67450579 67450601 -	23	48.62126	3.553861	2.25E-05
SL3.0ch12	67450580 67450601 -	22	40.90314	3.47697	0.000101
SL3.0ch12	67450709 67450731 -	23	257.8378	2.0396	0.000769
SL3.0ch12	67450710 67450731 -	22	100.103	3.36331	2.93E-06
SL3.0ch12	67450772 67450794 -	23	22.24661	7.596096	0.000493
SL3.0ch12	67450795 67450816 -	22	38.27347	2.819611	0.005121
SL3.0ch12	67566524 67566547 -	24	69.84649	2.968503	1.09E-05
SL3.0ch12	67606301 67606324 +	24	66.65619	2.102753	0.007634
SL3.0ch12	67675516 67675539 +	24	13.83469	6.916164	0.004606
SL3.0ch12	67675522 67675544 +	23	41.40887	8.487265	4.69E-05
SL3.0ch12	67675523 67675546 +	24	17.58494	7.246446	0.003163
SL3.0ch12	67675530 67675553 +	24	26.77978	7.857224	0.000372
SL3.0ch12	67675533 67675556 -	24	13.86194	6.908326	0.0043
SL3.0ch12	67675534 67675557 -	24	13.51195	6.879119	0.004584

control_2	control_2	control_11	dcl2_1	dcl2_2	Corresponding gene
42	38	49	2	6	
46	94	36	5	5	
251	352	340	18	27	
147	196	229	48	40	
42	22	32	2	1	
97	125	146	12	2	
341	396	537	14	39	
38	37	47	5	2	
121	217	233	2	4	
42	49	37	1	0	
125	100	102	26	14	
253	221	313	4	7	
35	34	41	1	1	
21	46	35	1	1	
21	31	32	0	0	
17	26	23	0	0	
393	364	241	1	3	
217	296	204	84	17	
13	34	26	0	0	
170	175	153	42	40	
76	96	67	4	0	
26	64	33	2	0	
328	719	479	3	5	
1690	1536	1426	240	397	
61	87	112	0	1	
28	60	28	2	0	
42	47	33	4	2	
55	81	109	18	10	
437	369	236	18	77	
46	27	58	2	3	
117	143	73	1	1	
545	612	244	1	2	
146	201	71	0	0	
11	26	33	0	0	
14	30	47	0	0	
19	63	69	0	2	
20	22	45	0	0	
67	35	39	7	2	
80	28	33	2	3	
46	50	46	4	0	
35	49	68	2	1	
81	42	81	2	5	
96	44	66	2	2	
359	281	441	3	4	
36	37	48	2	1	
121	71	155	7	9	
65	22	39	3	1	

64	39	48	0	1
70	44	57	9	5
66	29	60	2	0
29	21	24	0	0
66	56	81	4	1
40	42	33	1	1
78	80	75	9	2
40	34	39	5	2
50	45	56	2	1
106	85	139	4	0
30	12	22	0	0
51	26	38	3	4
33	32	56	3	2
62	69	98	4	1
70	53	49	6	5
136	147	156	34	29
213	313	376	20	32
38	27	36	1	1
62	85	58	2	3
74	166	140	4	1
17	43	41	3	0
29	31	51	0	3
41	36	46	2	3
56	48	105	1	0
29	29	42	2	1
54	99	111	5	2
169	253	276	12	17
29	32	69	0	0
49	32	47	1	2
41	30	47	0	0
61	48	79	3	7
178	141	312	1	6
107	150	103	33	17
56	85	35	9	4
56	54	34	4	5
42	100	74	0	1
106	171	164	5	7
31	56	37	2	1
28	42	42	2	1
41	68	50	1	0
40	43	60	0	0
124	235	117	2	0
66	142	92	1	3
50	111	92	4	0
70	131	141	6	4
206	411	406	5	7
33	97	73	0	5
29	74	44	2	0
12	48	29	0	0

46	69	45	0	0
23	33	23	0	0
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44	63	72	1	1
27	41	42	2	2
131	214	166	3	0
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45	96	67	0	0
65	116	101	5	3
72	107	93	0	2
25	56	35	1	1
19	25	27	0	0
14	18	32	0	0
126	216	158	4	0
32	64	40	4	0
36	51	47	0	3
440	760	563	56	42
223	400	301	5	5
61	112	75	0	4
17	34	23	0	0
46	198	74	0	1
38	54	53	1	2
72	99	114	2	1
32	49	55	0	0
37	24	37	0	2
22	14	27	0	0
17	36	24	0	0
189	301	172	57	23
68	62	65	12	6
44	60	45	7	6
44	64	54	3	3
50	85	31	1	4
27	50	49	1	3
16	45	66	0	0
34	20	10	0	0
86	177	107	20	8
40	98	63	6	4
31	94	53	9	5
73	152	64	21	13
68	93	37	1	0
56	52	26	1	0
76	86	56	17	8
51	39	72	2	2
104	84	79	18	2
454	379	231	136	28
232	239	204	89	37
123	129	127	3	2
38	25	9	0	0
19	22	24	0	0

57	58	51	0	0
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42	54	35	0	0
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108	201	116	1	1
11	33	22	0	0
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33	26	16	0	0
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43	24	35	4	1
132	209	267	46	41
46	39	17	1	2
265	280	203	5	9
76	96	34	1	3
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63	116	89	17	8
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71	80	97	2	1
36	35	43	0	1
38	37	50	0	1
24	20	38	0	0
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131	132	235	45	25
36	32	44	0	2
23	36	36	3	0
22	19	25	0	0
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48	47	50	2	0
123	74	105	1	3
195	135	188	2	3
45	31	25	0	0
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35	34	46	1	1
46	36	37	1	3
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47	50	73	0	0
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18	14	28	0	0
25	26	27	0	0
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84	82	88	0	1
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19	21	33	0	0
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217	256	378	13	18
88	97	73	0	2
18	55	79	0	0
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133	149	158	3	1
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90	143	132	12	8
112	198	175	10	7
78	96	92	8	3
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122	146	296	9	22
69	43	102	2	2
671	693	1068	51	115
580	520	1026	8	16
79	46	82	7	13
43	48	42	0	2
27	17	27	0	0
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113	106	119	11	12
99	107	114	7	12
39	17	47	0	0
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546	411	653	21	32
62	105	88	10	9
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73	75	127	2	6
110	161	158	3	6
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117	105	124	3	3
78	48	67	7	5
146	124	132	6	12
255	311	445	21	36
22	27	13	0	0
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87	88	134	2	2
22	32	31	0	0
13	46	111	1	1
60	139	82	1	1
28	45	36	0	0

82	165	100	9	23
50	42	55	0	0
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404	605	783	11	2
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44	38	37	2	0
16	20	23	0	0
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33	53	55	1	0
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185	284	231	2	0
38	51	52	1	0
75	123	140	3	2
86	97	83	1	0
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55	69	82	0	0
319	529	1041	13	1
230	245	425	11	3
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142	113	125	2	1
27	31	31	0	0
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215	289	255	6	0
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156	192	195	2	0
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169	229	230	5	1
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22	34	25	0	0
97	137	193	6	0
39	30	42	0	0
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82	78	81	1	0
36	24	27	0	0
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151	194	216	4	0
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84	79	80	0	0
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237	196	199	3	1
533	800	1109	9	1
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93	125	128	1	0
119	136	112	4	0
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29	31	42	0	0
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79	91	87	1	0
25	65	34	1	0
111	138	130	1	0
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188	166	257	22	7

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74	83	83	1	0
63	96	54	0	0
80	77	68	2	0
178	184	193	1	0
86	85	75	1	0
99	93	72	2	0
41	38	36	3	0
102	93	102	1	0
26	28	24	0	0
76	79	62	4	0
93	106	82	4	0
18	74	35	0	0
27	73	69	1	0
47	138	99	0	0
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37	119	101	9	0
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19	32	20	0	0
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223	307	427	57	5
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83	142	105	7	0
23	22	15	0	0
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38	45	38	2	0
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79	84	217	2	1
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67	91	88	2	0
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22	47	52	3	0
13	21	28	0	0
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246	208	238	6	1
73	122	85	3	0
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69	157	105	3	0
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23	25	21	0	0
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393	542	867	20	2
97	143	141	4	0
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71	87	129	3	0
13	25	31	0	0
136	114	148	1	1
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77	127	131	5	0
82	117	128	1	0
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19	26	38	0	0
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63	116	124	14	1
102	184	161	4	0
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38	22	18	0	0
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22	26	24	0	0
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24	42	36	4	0
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9	30	30	0	0
121	267	213	18	14
133	236	287	5	22

33	79	83	0	2
117	358	343	6	5
28	52	78	1	5
64	233	222	10	19
35	27	23	0	0
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70	105	105	8	3
32	34	37	0	0
239	259	139	71	37
71	81	174	1	4
66	112	78	2	2
33	39	33	2	0
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60	92	107	2	2
39	32	46	2	0
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75	120	72	10	9
1584	1372	1247	605	270
1096	542	325	17	14
376	165	135	6	3
214	131	70	3	2
208	92	165	6	1
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146	156	134	45	13
57	57	26	0	1
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142	227	157	6	30
150	107	156	41	2
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122	26	46	0	0
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81	107	102	24	14
106	0	0	0	0
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433	388	321	2	0
734	744	733	1	1
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269	194	191	0	2
673	420	672	1	4
23	28	15	0	0
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284	292	314	93	70
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3042	4604	3742	1340	897
36	42	43	0	0
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790	968	1224	13	19
79	84	65	1	1
479	571	621	12	13
132	89	87	23	9
368	389	377	12	6
187	180	152	5	5
215	291	190	27	17
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123	94	168	6	14
29	31	21	0	0
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76	96	64	3	1
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176	425	224	24	50
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46	60	102	3	1
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336	486	460	102	82
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218	184	198	69	16
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38	31	36	4	2
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43	52	39	6	3
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616	1090	483	245	108
145	190	134	12	13
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608	441	946	46	22
522	318	794	18	12
246	155	449	25	37
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173	106	289	15	22
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306	257	369	110	54
753	717	1016	98	33
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193	146	177	12	7
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3710	1381	4467	159	179
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462	258	905	30	42
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26	41	43	3	3
105	164	131	7	6
98	147	117	35	17
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37	39	53	1	0
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70	93	48	18	4
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93	94	48	14	5
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17	114	43	3	5
217	219	147	13	29
88	103	104	29	15
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387	506	275	132	46
38	14	19	0	0
29	34	49	1	0
177	160	214	6	0
155	142	108	16	25
53	52	24	7	0
78	64	35	3	2
49	65	29	4	5
144	146	93	13	19
94	220	146	43	15
28	69	47	1	0
146	146	93	7	10
27	68	54	7	2
61	118	97	22	10
26	36	122	2	0
26	32	35	1	2
50	60	26	2	2
64	62	68	2	7
40	32	39	3	3
24	45	41	2	3
109	0	0	0	0
22	25	15	0	0
30	29	28	0	0
59	34	35	1	5
32	20	63	1	3
20	32	35	0	0
110	94	100	10	6
192	176	123	33	23
156	191	131	34	19
104	343	136	14	2
16	30	27	0	0
689	1426	1003	276	106

155	156	167	56	22
623	188	727	4	6
88	87	112	2	2
51	144	28	1	1
3247	4835	4206	39	40
13	23	46	0	0
37	59	74	0	0
39	38	102	1	5
16557	14866	40068	327	715
99	98	186	5	0
76	84	156	1	1
50	56	73	0	0
864	713	1300	16	30
7600	9404	11540	85	163
34914	33289	49052	361	525
828	2396	637	11	13
359	771	471	2	0
306	1040	337	2	0
37	86	84	1	2
69	192	133	0	3
23	40	36	0	0
23	160	35	0	0
306	908	709	1	0
40	94	106	1	3
19	131	70	0	0
29	70	77	1	0
27	85	108	2	0
91	298	322	0	4
37	66	68	1	0
9	31	52	0	0
19	60	14	0	0
36	67	82	0	2
79	150	94	1	3
38	44	54	0	0
131	128	195	2	1
14	43	52	0	2
30852	52364	60701	762	1440
54	249	64	4	0
29	116	53	1	0
48	107	93	1	0
143	336	331	7	7
625	945	1161	15	23
131	46	128	1	0
42	130	141	1	1
43	59	44	3	0
27	38	54	0	2
38	64	67	0	0
47	124	123	2	1
214	225	124	36	18

17	45	9	0	0
24	51	47	0	0
188	189	88	5	5
56	130	117	2	0
16	49	10	0	0
14	58	6	0	0
20	19	25	0	0
110	192	281	1	1
669	653	1238	11	22
86	92	52	2	0
44	29	9	0	0
209	257	92	0	2
26	20	62	1	2
659	914	515	32	8
209	150	219	1	5
36	31	31	0	0
713	1142	1325	13	10
72	204	43	16	4
56	194	226	1	2
121	223	283	3	3
175	227	352	1	4
99	167	198	1	1
103	136	258	0	2
185	320	412	8	6
21	58	87	2	0
22	28	20	0	0
81	119	58	1	0
35	36	36	1	2
242	285	278	2	2
15	15	31	0	0
179	150	280	1	1
23	33	31	0	0
146	155	68	4	0
1760	868	1899	12	19
164	53	82	0	2
6776	7248	8961	73	59
43	29	8	0	0
19924	18730	18096	194	50
187	248	399	0	2
74	89	100	2	0
24	21	40	0	0
25	30	10	0	0
33	18	15	0	0
171	186	188	0	2
150	175	227	0	0
24	27	20	0	0
29	24	34	0	0
50	48	14	0	0
579	807	1378	9	19

186	105	240	5	0
28	26	12	0	0
82	71	97	0	0
69	67	109	1	5
56	88	33	3	1
131	112	323	0	2
93	233	291	3	4
15	30	70	0	3
49	177	164	2	4
47	102	86	1	1
73	101	73	1	0
310	160	203	3	6
43	36	50	0	1
19	28	76	0	2
56	53	96	1	2
2333	1779	3171	48	144
27	19	44	0	0
228	187	502	7	13
75	64	146	2	1
94	41	80	0	1
54	43	30	1	1
116	103	53	1	0
30	44	69	2	6
18	17	38	0	0
39	71	71	0	1
51	60	39	4	4
20	50	13	0	0
51	51	62	10	3
38	83	81	4	7
36	33	26	0	0
25	61	42	3	3
6	77	53	2	0
27	55	43	0	1
18	53	19	0	0
15	40	25	0	0
28	25	42	0	0
41	46	35	0	0
23	25	22	0	0
9	20	38	0	0
63	29	22	0	0
42	42	48	0	1
26	39	52	3	1
43	42	38	0	0
19	28	26	0	0
30	28	29	0	0
61	59	62	4	3
25	38	37	1	2
47	58	63	3	3
196	303	364	15	17

77	97	101	2	1
25	34	36	2	1
419	417	484	15	17
26	27	27	0	0
65	94	50	6	0
21	26	15	0	0
52	44	30	0	0
41	42	61	1	1
145	315	365	6	6
28	54	47	2	4
194	166	209	9	22
16	24	20	0	0
39	34	41	0	2
29	39	42	0	2
224	183	168	3	6
504	798	952	25	29
46	46	61	2	4
19	34	40	0	0
137	138	145	3	5
23	34	41	0	0
425	585	429	181	77
38	19	51	0	3
68	65	40	0	0
46	60	58	5	5
89	114	106	6	4
36	54	55	0	0
48	45	29	2	0
176	203	326	6	6
128	130	162	6	7
70	84	108	3	2
56	68	60	5	0
120	88	129	3	4
58	54	74	3	8
480	497	617	10	25
36	67	40	4	5
181	219	213	28	21
27	28	49	0	2
51	107	87	11	9
86	141	239	0	4
74	47	80	2	11
109	125	195	5	19
21	37	38	0	0
27	56	48	2	2
31	61	67	0	0
159	143	206	12	23
42	69	58	6	8
48	81	108	3	4
66	103	72	0	1
51	111	141	1	0

32	103	55	0	1
82	106	85	0	1
570	748	711	84	184
35	47	37	1	1
23	35	50	1	2
199	258	323	9	21
114	151	301	1	8
166	181	353	14	35
39	35	52	0	0
56	85	105	6	0
53	40	36	0	4
51	45	54	1	0
29	34	51	2	4
37	52	28	0	0
31	36	40	1	4
125	244	171	18	7
44	97	69	2	1
51	105	105	2	0
25	58	37	1	1
51	97	70	3	0
13	33	18	0	0
104	64	162	2	13
33	37	48	1	2
17	24	20	0	0
17	22	24	0	0
42	66	50	2	1
144	148	204	2	3
160	227	417	10	8
35	43	29	1	2
30	35	38	3	2
665	677	955	9	51
54	96	79	1	2
24	50	61	3	3
84	101	117	15	20
35	65	67	2	2
20	28	33	0	0
57	89	63	3	3
29	37	53	0	2
50	99	63	2	2
77	150	132	16	15
121	184	143	2	0
119	236	165	3	3
24	36	36	1	2
70	98	58	3	1
46	70	57	1	0
152	170	67	32	16
20	80	54	0	1
194	111	178	38	29
61	45	87	2	3

84	41	186	0	1
146	558	383	74	27
441	1723	1124	220	138
14	15	35	0	0
45	39	45	2	2
39	45	58	2	4
209	176	264	4	13
34	34	36	0	3
299	383	523	14	13
148	383	380	7	10
53	146	105	1	0
35	61	85	2	1
39	89	99	9	8
66	120	103	12	6
49	124	108	4	0
91	167	188	3	3
70	209	154	10	3
7	58	54	0	0
43	67	67	1	1
13	28	23	0	0
35	45	33	0	5
57	48	37	7	3
1583	1878	2547	126	136
273	211	215	4	4
36	32	29	0	0
26	25	31	0	0
49	44	40	1	0
333	349	370	8	11
1210	1536	2118	77	272
1796	2283	2963	101	91
107	156	243	1	4
31	40	31	3	0
64	49	65	6	4
326	425	502	9	8
149	124	137	1	4
198	182	181	9	7
397	589	558	4	0
107	95	109	5	1
162	222	203	7	6
67	126	147	1	0
62	62	54	1	0
34	54	64	3	7
1178	2048	2481	281	219
105	146	177	6	16
125	106	86	0	2
26	22	51	1	1
77	70	101	2	4
33	37	34	2	1
614	567	789	35	48

243	177	237	9	6
87	61	83	2	1
31	24	15	0	0
47	51	66	1	0
28	48	63	1	3
104	69	131	2	5
31	41	50	1	1
86	52	110	4	3
46	61	36	1	0
25	45	16	0	0
40	41	60	0	1
52	56	51	4	0
158	93	251	6	7
29	39	44	1	4
1433	2326	2204	28	40
168	210	176	16	7
77	93	60	3	0
20	64	42	0	2
27	43	33	0	0
48	84	46	2	0
119	236	116	6	0
91	167	103	4	1
27	48	29	2	3
29	72	40	2	0
9	26	28	0	0
28	35	22	0	0
60	76	78	1	1
35	48	49	0	0
30	64	56	1	4
28	51	34	2	2
23	26	38	0	0
28	53	26	0	0
75	121	85	2	1
133	197	127	1	2
184	324	219	8	8
44	88	62	2	0
31	50	28	2	2
45	134	96	3	6
35	33	33	1	1
52	67	52	1	1
30	113	113	13	6
35	138	121	8	4
103	416	291	48	17
20	91	49	4	0
37	48	67	0	5
59	78	29	11	4
41	42	14	0	0
36	47	6	0	0
38	35	59	3	6 sIDCL2a

54	65	89	4	8 sIDCL2a
68	58	102	2	11 sIDCL2a
38	34	54	1	5 sIDCL2a
44	51	101	1	9 sIDCL2a
39	39	41	1	3 sIDCL2a
88	81	209	3	14 sIDCL2a
64	69	86	1	1 sIDCL2a
38	27	58	0	0 sIDCL2a
49	43	81	1	9 sIDCL2a
37	47	66	0	1 sIDCL2a
259	223	299	4	12 sIDCL2a
50	37	51	0	4 sIDCL2a
30	43	44	0	2 sIDCL2a
29	55	45	0	4 sIDCL2a
22	34	32	0	0 sIDCL2a
108	132	154	1	7 sIDCL2a
65	66	98	1	3 sIDCL2a
58	65	114	3	14 sIDCL2a
24	49	68	0	5 sIDCL2a
33	32	51	0	2 sIDCL2a
37	30	45	0	0 sIDCL2a
107	69	103	0	2 sIDCL2a
107	81	85	3	8 sIDCL2a
43	31	74	0	4 sIDCL2a
65	49	73	1	3 sIDCL2a
61	68	96	11	7
57	67	49	4	1
39	32	42	0	0
43	37	40	0	0
57	62	91	0	2
257	225	383	7	14
35	54	60	3	2
106	89	120	8	0
26	37	30	2	1
29	24	26	0	0
59	30	65	5	6
41	41	38	0	4
47	64	81	1	5
65	50	38	4	1
330	890	587	27	25
43	41	54	2	2
43	37	32	2	0
62	105	142	1	3
101	110	139	14	16
37	32	41	4	1
28	59	35	1	0
43	36	46	0	0
71	66	94	1	1
143	111	123	3	3

70	71	38	3	4
100	101	142	7	26
68	66	93	1	2
50	43	103	1	1
67	37	47	7	6
45	45	43	1	0
55	74	124	0	5
30	11	31	0	0
274	255	308	7	19
64	57	57	3	2
127	95	166	2	6
549	467	572	41	20
65	100	88	6	10
205	192	134	3	1
23	51	21	0	0
59	100	54	2	1
25	22	29	0	0
48	36	46	1	2
51	53	50	3	5
125	93	95	4	10
49	40	53	1	1
33	47	42	3	3
74	64	72	10	4
72	61	55	2	1
82	106	111	5	2
37	45	44	2	4
389	705	665	153	116
29	53	49	1	0
63	90	72	0	0
35	92	68	7	7
70	46	58	6	3
44	48	74	1	1
14	26	20	0	0
33	32	20	0	0
26	19	21	0	0
74	130	111	11	10
228	335	221	0	0
35	36	20	0	0
25	26	16	0	0
231	312	105	0	0
55	54	41	1	0
109	143	39	0	0
167	142	168	31	16
55	50	89	0	0
133	115	41	21	11
628	689	278	157	105
514	699	412	166	68
12	25	39	0	0
182	226	82	47	19

73	226	75	24	13
28	40	32	3	0
78	54	59	12	1
228	128	103	29	7
73	61	31	3	8
26	54	36	2	2
239	264	145	56	43
22	67	36	0	0
385	409	331	150	59
21	31	33	0	0
55	51	54	4	1
24	35	55	0	3
743	1276	1666	41	116
561	1116	1248	33	50
81	71	165	3	6
76	65	69	2	1
28	61	31	1	2
42	40	44	1	2
84	91	104	2	4
25	19	22	0	0
73	80	76	2	2
55	56	51	5	1
140	228	204	5	2
232	341	380	13	13
38	33	32	0	0
53	73	90	1	0
53	52	65	5	1
41	80	61	2	0
89	141	245	2	1
110	156	207	7	8
50	30	53	2	3
70	71	113	5	5
39	43	63	2	2
37	47	31	3	2
310	268	170	92	27
60	111	107	7	2
56	51	34	1	0
38	44	40	4	2
38	29	50	3	1
103	117	91	21	11
23	41	40	1	3
60	34	75	4	2
47	71	52	4	4
29	55	59	1	1
29	46	48	0	1
62	113	107	6	1
44	68	48	0	0
24	28	34	0	0
23	32	43	1	2

121	149	258	8	6
32	31	50	1	0
252	273	142	68	34
262	436	226	69	42
414	454	286	126	44
345	342	168	101	43
154	62	66	19	14
215	105	91	20	19
95	59	46	12	7
61	40	37	7	5
290	555	677	24	106
200	289	161	64	36
381	764	518	211	73
89	167	80	19	13
232	545	208	14	72
32	55	29	0	2
27	62	33	0	2
38	51	19	0	3
46	77	24	0	1
176	195	112	4	21
36	41	27	1	3
194	180	96	11	37
694	715	507	28	133
128	135	112	2	23
30	47	65	0	6
153	223	175	3	23
90	104	69	7	9
115	99	65	29	5
49	74	21	4	1
101	331	106	20	30
27	27	10	0	0
133	94	65	1	0
44	22	14	0	0
28	20	37	0	0
55	25	22	0	0
25	16	22	0	0
20	23	29	0	0
69	49	43	0	0
35	33	67	0	0
463	439	517	0	0
158	131	65	32	9
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44	55	26	2	0
354	452	328	153	77
17	21	21	0	0
22	20	20	0	0
104	117	95	18	8
7	35	26	0	0

301	532	716	17	10
93	135	221	12	15
16	22	27	0	0
53	166	207	6	0
73	125	156	6	1
86	70	108	5	4
80	88	49	14	5
71	98	71	8	4
29	31	25	0	0
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36	52	49	0	2
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126	141	150	2	1
55	62	53	0	0
94	86	60	21	10
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21	43	19	0	0
63	86	57	4	7
102	161	141	10	3
191	321	228	78	35
38	63	52	6	6
48	31	35	0	0
276	341	442	23	37
69	118	104	0	1
9	33	29	0	0
105	92	64	3	8
137	251	207	11	22
38	41	38	1	1
90	98	106	6	13
41	31	32	1	4
84	73	67	5	5
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70	86	60	11	6
24	38	30	0	0
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58	94	30	0	1
78	146	69	0	1
35	59	30	0	5
28	71	39	0	1
36	70	24	0	3
52	65	40	0	3
46	56	23	0	0
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56	96	51	17	3
23	24	33	0	0
225	352	238	62	31
97	156	147	20	11

104	83	41	5	13
53	56	29	4	3
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54	96	81	14	11
58	73	64	8	9
73	100	53	18	10
35	79	23	4	1
87	112	75	24	14
31	44	66	6	3
166	177	169	1	9
99	46	67	5	10
574	353	458	19	70
177	223	128	47	34
86	99	69	17	11
41	56	69	9	7
151	299	147	28	18
1008	1059	1105	321	168
37	55	27	3	4
43	59	86	0	2
46	56	40	3	5
179	261	214	9	12
35	33	39	3	3
46	89	58	2	0
17	56	47	0	0
47	72	73	0	1
39	43	38	1	1
46	56	38	1	0
265	553	454	73	64
64	102	115	5	13
12	53	46	0	0
57	165	131	4	1
34	73	61	6	2
50	52	61	0	7
102	199	132	41	11
34	32	38	0	0
79	60	51	1	1
32	34	39	1	1
198	288	309	80	34
51	37	62	3	8
36	42	45	1	6
158	157	110	35	31
93	83	51	13	5
92	79	95	20	11
41	34	69	1	0
25	20	25	0	0
34	81	97	5	1

125	186	159	55	15
65	70	83	8	5
46	80	58	9	7
87	170	112	32	16
12	31	26	0	0
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157	163	156	59	24
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95	33	93	14	7
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55	88	52	5	1
97	166	164	11	2
149	233	129	8	3
402	693	676	21	8
66	135	140	6	0
30	45	36	2	0
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2406	2043	3195	664	382
167	286	180	59	38
39	50	34	1	4
143	134	68	19	9
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26	18	32	0	0
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22	26	32	0	0
15	22	26	0	0
195	274	437	16	13
103	205	278	1	1
30	55	32	3	0
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37	60	34	0	0
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113	140	89	38	10
71	134	86	16	3
26	73	43	2	4
20	55	36	0	2
131	222	431	5	12
98	107	144	4	1
26	114	100	10	4
62	354	341	43	20
84	58	53	10	9
34	34	32	3	0

117	123	100	0	3
18	52	18	0	0
42	210	110	0	0
224	286	184	24	2
79	30	44	0	0
1165	901	883	177	55
207	166	215	24	9
60	65	44	10	7
65	54	86	6	1
55	40	26	3	0
515	580	565	51	108
87	141	68	20	14
41	43	21	2	3
117	139	78	18	25
32	31	38	0	0
51	90	65	8	4
246	252	278	28	48
42	33	42	1	2
18	31	32	0	0 sIDCL2d
14	27	21	0	0 sIDCL2d
14	21	29	0	0 sIDCL2d
44	56	55	0	0 sIDCL2d
22	37	32	0	0 sIDCL2d
20	42	31	0	0 sIDCL2d
17	23	23	0	0 sIDCL2d
32	47	46	0	0 sIDCL2b
19	16	29	0	0 sIDCL2b
18	22	25	0	0 sIDCL2b
49	59	49	1	0 sIDCL2b
19	24	26	0	0 sIDCL2b
23	26	27	0	0 sIDCL2b
30	50	47	1	0 sIDCL2b
23	27	16	0	0 sIDCL2b
215	345	284	96	62
38	68	72	2	2
35	33	55	1	2
43	90	44	0	0
50	50	69	1	3
115	43	32	9	0
70	68	26	0	0
100	0	0	0	0
69	34	23	3	0
420	265	512	38	26
82	382	212	60	23
48	64	88	1	6
237	261	357	1	5
65	130	162	4	5
15	23	23	0	0
38	69	77	1	3

35	69	70	1	2
57	69	104	1	1
22	18	31	0	0
37	46	33	4	2
74	89	34	1	1
57	29	49	3	6
24	15	23	0	0
75	42	100	2	10
29	42	52	0	0
49	68	45	1	0
145	204	208	10	3
206	227	280	7	13
41	62	98	3	9
45	57	42	1	3
35	57	63	0	4
124	184	228	11	9
33	31	38	0	0
90	132	176	8	4
32	58	87	2	3
39	42	70	2	2
54	86	164	4	17
59	74	110	2	5
56	61	66	16	4
44	87	83	1	1
235	325	314	7	5
60	141	83	0	0
69	223	137	1	1
38	69	56	1	0
19	37	51	3	0
30	57	43	0	3
100	133	113	0	2
71	86	124	1	3
56	80	114	4	8
226	340	411	6	5
85	122	143	10	3
67	101	66	7	6
62	170	101	1	1
44	79	87	11	11
55	102	77	2	0
31	33	20	0	0
58	42	73	1	0
157	187	181	9	23
28	23	39	0	0
33	38	44	2	1
30	38	30	0	0
39	61	72	0	2
69	115	128	1	9
107	129	124	3	6
22	26	22	0	0

48	45	49	2	1
332	348	484	88	64
34	31	29	2	1
61	63	58	9	5
46	51	55	1	2
72	68	127	1	2
119	283	142	41	14
17	49	99	0	1
46	26	97	2	6
32	86	76	12	5
55	86	101	3	1
17	20	23	0	0
62	104	64	6	8
34	40	28	1	3
38	38	29	2	0
95	138	139	23	14
39	49	47	2	4
26	21	21	0	0
133	110	85	2	10
237	170	178	18	27
195	336	129	72	21
471	557	408	126	53
152	161	195	30	8
187	289	102	33	18
75	76	72	14	9
273	315	290	65	34
276	282	237	35	29
405	391	491	89	88
280	332	381	61	48
371	432	454	43	30
58	107	112	3	10
47	38	100	2	8
45	54	62	8	2
66	55	52	6	4
36	42	62	5	3
106	112	56	22	7
117	135	50	22	13
379	478	326	126	92
128	116	127	21	14
61	49	37	8	2
141	115	127	36	16
96	140	51	13	17
29	71	54	2	6
1299	2262	1448	229	182
12	21	27	0	0
79	26	9	0	0
45	101	63	0	1
318	320	394	17	43
158	170	86	3	2

38	44	44	0	0
266	56	54	15	16
134	54	39	10	5
91	37	19	2	4
147	26	32	7	2
216	340	338	85	60
72	75	57	15	7
21	51	92	3	2
67	63	113	3	1
51	118	175	4	0
25	28	55	2	0
82	140	164	0	0
22	31	46	1	1
54	31	35	2	5
79	109	155	5	7
105	159	197	1	10
44	93	120	2	9
67	89	117	3	9
86	115	146	1	6
125	142	162	3	6
36	63	92	4	5
53	64	79	3	8
57	42	78	0	3
73	116	78	2	0
83	194	123	5	0
134	225	176	3	3
68	119	85	3	2
72	130	107	2	3
15	30	33	0	0
43	53	47	0	1
37	48	40	0	0
126	149	172	16	9
242	278	318	5	9
50	93	79	1	2
14	36	26	0	0
294	504	532	6	16
595	870	1438	12	44
21	44	40	2	1
34	49	52	3	2
37	40	43	1	0
53	73	68	11	4
56	102	131	2	1
27	76	65	1	1
46	86	62	1	0
42	69	65	0	0
75	126	126	5	3
36	61	80	1	1
37	86	51	1	1
54	113	59	2	5

32	100	47	5	0
284	864	440	18	9
38	100	48	1	0
17	70	47	1	1
231	220	383	33	53
30	17	71	0	2
40	59	60	2	2
183	235	370	19	53
26	112	85	7	4
63	134	201	5	10
75	89	58	0	1
24	55	76	2	2
16	32	19	0	0
48	64	70	0	0
107	69	203	0	3
277	312	489	6	21
116	105	146	4	4
258	218	389	4	3
126	116	104	0	1
25	28	34	0	0
211	136	165	1	0
28	21	43	0	0
195	418	284	74	52
77	112	163	17	15
34	44	44	1	0
223	162	89	46	18
68	48	34	1	1
39	34	23	0	0
186	163	112	6	1
253	346	152	55	27
43	83	61	1	0
38	59	62	2	1
396	146	119	13	9
89	92	54	17	8
53	72	60	5	2
141	192	126	1	6
27	50	29	0	0
34	55	20	0	0
23	34	17	0	0
64	76	46	0	4
179	228	205	74	29
14	56	23	0	0
37	35	24	1	1
90	62	35	4	9
64	176	62	21	11
64	64	16	0	0
28641	35562	19710	11272	6414
38	28	42	0	2
36	63	57	1	1

23	68	48	0	0
18	66	33	1	1
106	89	54	9	4
74	65	64	5	6
325	511	351	130	53
114	181	193	10	18
36	49	34	0	0
76	58	51	4	11
121	132	92	17	10
136	98	75	27	17
35	29	12	0	0
81	31	96	0	0
28	9	49	0	0
55	20	60	0	0
26	20	26	0	0
31	26	16	0	0

Supplementary Table S3. sIDCL2-inhibited sRNAs.

seqname	start	end	strand	length	baseMean	log2FoldCl	lfcSE	stat
SL3.0ch00	4197337	4197366	+	30	189.75214	-2.454822	0.587363	-4.179395
SL3.0ch00	5825530	5825553	-	24	14.412497	-3.893104	0.8998015	-4.326625
SL3.0ch00	12234965	12234985	+	21	50.943701	-2.235244	0.5195665	-4.302132
SL3.0ch00	14050385	14050408	+	24	6.2792306	-6.495627	1.563495	-4.154556
SL3.0ch00	18131047	18131070	-	24	21.68777	-3.05374	0.7366661	-4.145352
SL3.0ch00	19658537	19658560	+	24	83.00837	-1.92803	0.4615679	-4.177133
SL3.0ch01	344442	344465	+	24	27.642219	-4.134774	0.7519138	-5.499
SL3.0ch01	344464	344487	-	24	11.929112	-6.432761	1.4241373	-4.516953
SL3.0ch01	344472	344495	-	24	34.311879	-4.540913	0.7314677	-6.207948
SL3.0ch01	634137	634160	-	24	15.72432	-3.574946	0.8574479	-4.169287
SL3.0ch01	831855	831875	+	21	202.86752	-3.071224	0.5835588	-5.26292
SL3.0ch01	1196734	1196757	+	24	107.70935	-1.991296	0.4789547	-4.157588
SL3.0ch01	1606295	1606318	-	24	61.155111	-3.171113	0.6167695	-5.141487
SL3.0ch01	1606297	1606318	-	22	23.003563	-2.960357	0.7075007	-4.184246
SL3.0ch01	2130320	2130341	+	22	158.58356	-1.740832	0.40766	-4.270305
SL3.0ch01	3548959	3548980	-	22	27.548698	-2.634854	0.6413568	-4.108251
SL3.0ch01	4265928	4265951	-	24	114.54291	-2.289784	0.5556281	-4.121074
SL3.0ch01	5771747	5771770	+	24	6.7795821	-6.604502	1.5441616	-4.27708
SL3.0ch01	5771791	5771814	-	24	15.10215	-5.867223	1.2516222	-4.687695
SL3.0ch01	6000927	6000950	+	24	67.792711	-2.16749	0.522076	-4.151676
SL3.0ch01	8651528	8651551	+	24	38.789507	-2.870897	0.7007345	-4.096983
SL3.0ch01	24386376	24386404	-	29	64.685071	-3.11381	0.7115344	-4.376191
SL3.0ch01	28922493	28922514	-	22	108.49002	-2.018862	0.4839092	-4.171985
SL3.0ch01	32848327	32848350	+	24	20.417929	-2.960779	0.7211518	-4.105626
SL3.0ch01	54390070	54390093	-	24	17.21818	-5.486382	1.1723354	-4.679874
SL3.0ch01	66781780	66781803	+	24	26.476662	-3.964618	0.7726436	-5.131237
SL3.0ch01	66781780	66781799	+	20	31.917099	-3.485527	0.8112884	-4.296286
SL3.0ch01	75304605	75304628	-	24	28.763445	-5.781171	0.9262689	-6.241353
SL3.0ch01	76989577	76989600	-	24	13.579452	-4.331185	0.9669061	-4.479426
SL3.0ch01	76989578	76989601	-	24	12.213312	-5.602597	1.2936619	-4.330805
SL3.0ch01	76989605	76989628	+	24	51.023058	-2.443808	0.5228133	-4.674343
SL3.0ch01	76989865	76989888	+	24	18.681709	-3.153189	0.7769297	-4.058525
SL3.0ch01	76990255	76990278	+	24	29.82372	-2.954667	0.6168734	-4.789746
SL3.0ch01	76990256	76990279	+	24	78.658329	-2.926897	0.5319749	-5.501946
SL3.0ch01	78091130	78091153	-	24	63.898414	-2.268673	0.5305262	-4.276269
SL3.0ch01	78606889	78606913	-	25	33.545455	-2.646387	0.6389811	-4.141573
SL3.0ch01	78846748	78846771	-	24	23.51955	-5.528144	0.9564985	-5.779564
SL3.0ch01	78846763	78846786	-	24	62.684629	-3.376686	0.6470458	-5.21862
SL3.0ch01	78981754	78981776	-	23	19.424447	-5.660416	1.0760516	-5.260357
SL3.0ch01	78981757	78981780	-	24	11.432038	-4.831847	1.1492555	-4.204328
SL3.0ch01	78981759	78981782	-	24	49.08329	-4.96865	0.716209	-6.93743
SL3.0ch01	79029359	79029380	-	22	46.339129	-2.521203	0.6193254	-4.070885
SL3.0ch01	79550483	79550506	-	24	61.481969	-2.317218	0.5058273	-4.581046
SL3.0ch01	80079269	80079292	+	24	58.051541	-3.300129	0.5452997	-6.051954
SL3.0ch01	80079271	80079294	+	24	11.238197	-4.802239	1.1619385	-4.132955
SL3.0ch01	80370519	80370540	-	22	13.346291	-5.104867	1.1198966	-4.558338
SL3.0ch01	81036481	81036505	-	25	46.430841	-3.136836	0.7335536	-4.27622
SL3.0ch01	81256598	81256621	+	24	75.846191	-3.560732	0.6872134	-5.181406
SL3.0ch01	82939405	82939428	+	24	14.817202	-3.724969	0.882778	-4.219598
SL3.0ch01	83273599	83273620	-	22	92.960054	-2.885462	0.5362405	-5.380911

SL3.0ch01	83850163	83850184	+	22	126.51806	-2.659732	0.4487001	-5.927637
SL3.0ch01	83850163	83850186	+	24	108.25248	-1.929773	0.4634986	-4.163493
SL3.0ch01	83947146	83947167	+	22	76.379568	-5.462263	1.2511612	-4.365755
SL3.0ch01	83947146	83947168	+	23	11.428074	-5.447902	1.2866683	-4.234115
SL3.0ch01	83947146	83947169	+	24	33.441446	-5.198189	0.808824	-6.426848
SL3.0ch01	83947147	83947170	+	24	6.0853896	-6.44501	1.5834215	-4.070306
SL3.0ch01	85209906	85209929	+	24	51.788587	-2.669788	0.5825134	-4.583222
SL3.0ch01	86868493	86868516	+	24	17.299945	-5.105522	1.028724	-4.962966
SL3.0ch01	87000160	87000183	+	24	25.391248	-3.674668	0.7689571	-4.778768
SL3.0ch01	87186912	87186933	-	22	134.72418	-1.990927	0.4325033	-4.603265
SL3.0ch01	87253178	87253201	+	24	33.315106	-3.790759	0.7747599	-4.892818
SL3.0ch01	87286677	87286700	+	24	182.0654	-1.629619	0.4025329	-4.048411
SL3.0ch01	87416729	87416750	+	22	128.20055	-2.028344	0.4960007	-4.089398
SL3.0ch01	89708417	89708440	+	24	110.12312	-2.117132	0.4758976	-4.448712
SL3.0ch01	90270631	90270654	+	24	13.068588	-5.071614	1.1447284	-4.430408
SL3.0ch01	90270636	90270659	-	24	21.726467	-6.430386	1.2036039	-5.34261
SL3.0ch01	90270641	90270664	+	24	13.13021	-6.574206	1.3973248	-4.704852
SL3.0ch01	91152323	91152346	+	24	6.554243	-6.576335	1.6185371	-4.063135
SL3.0ch01	91188907	91188931	+	25	30.912218	-3.191583	0.7368433	-4.331427
SL3.0ch01	91188907	91188930	+	24	206.00955	-2.341757	0.4291777	-5.456381
SL3.0ch01	91442291	91442311	-	21	268.44374	-1.960286	0.4471022	-4.384426
SL3.0ch01	92237141	92237164	+	24	6.5902849	-6.576945	1.5607571	-4.213945
SL3.0ch01	92237182	92237205	+	24	9.5157663	-7.097223	1.4600154	-4.861061
SL3.0ch01	93151388	93151411	-	24	11.251929	-4.400786	1.0579916	-4.159566
SL3.0ch01	93955601	93955622	+	22	32.238985	-2.668877	0.6553741	-4.072296
SL3.0ch01	94226178	94226201	+	24	32.844149	-2.728634	0.6296363	-4.333667
SL3.0ch01	95533063	95533086	-	24	129.08373	-3.02265	0.6406507	-4.718093
SL3.0ch01	95533133	95533156	-	24	117.76771	-2.735674	0.5187388	-5.273703
SL3.0ch01	95533201	95533224	-	24	15.955446	-4.126878	0.93794	-4.399938
SL3.0ch01	95839361	95839384	-	24	52.752531	-2.473798	0.5676591	-4.357893
SL3.0ch01	95998355	95998378	-	24	19.903248	-4.219907	0.8385615	-5.032316
SL3.0ch01	97439085	97439108	+	24	50.968626	-2.042576	0.5019554	-4.069238
SL3.0ch01	97825379	97825402	+	24	41.178502	-3.082049	0.7104393	-4.33823
SL3.0ch01	97837777	97837800	+	24	72.464496	-2.175662	0.5062107	-4.297938
SL3.0ch02	1299720	1299743	+	24	22.944524	-3.128437	0.7401835	-4.22657
SL3.0ch02	4568940	4568963	+	24	33.068645	-2.696514	0.6060159	-4.449576
SL3.0ch02	4573589	4573609	+	21	25.895864	-3.313756	0.8122585	-4.079682
SL3.0ch02	4574111	4574134	+	24	176.14676	-2.300359	0.4225565	-5.443909
SL3.0ch02	4574114	4574137	+	24	88.392236	-1.94437	0.4686853	-4.148562
SL3.0ch02	22691573	22691593	-	21	56.886354	-2.408182	0.5111505	-4.711297
SL3.0ch02	22977307	22977330	+	24	233.6503	-1.756307	0.4061664	-4.324106
SL3.0ch02	29425763	29425786	+	24	23.651294	-3.438138	0.7130867	-4.821487
SL3.0ch02	31262518	31262541	+	24	29.82506	-2.737994	0.6182359	-4.42872
SL3.0ch02	31751215	31751236	+	22	28.597097	-3.07257	0.6762684	-4.543418
SL3.0ch02	32822320	32822343	-	24	9.2335131	-6.057293	1.4653743	-4.133615
SL3.0ch02	34747313	34747334	+	22	115.25918	-3.752065	0.5959415	-6.296029
SL3.0ch02	34747313	34747336	+	24	28.902205	-3.195146	0.7411312	-4.311174
SL3.0ch02	35434727	35434750	+	24	177.21739	-2.970757	0.6004341	-4.947681
SL3.0ch02	35434740	35434763	-	24	12.933672	-5.636716	1.2865237	-4.381354
SL3.0ch02	37356773	37356796	-	24	2734.898	-2.128763	0.4595134	-4.632647
SL3.0ch02	38247984	38248007	+	24	107.85887	-2.432792	0.5683558	-4.280404
SL3.0ch02	38714765	38714788	+	24	86.720899	-6.426144	0.7116596	-9.029801

SL3.0ch02	39385546	39385566	-	21	92.61444	-2.979178	0.6734195	-4.423955
SL3.0ch02	40664328	40664351	-	24	22.422591	-6.469813	1.2034066	-5.376248
SL3.0ch02	41179616	41179639	-	24	31.741736	-4.932117	0.8501106	-5.801736
SL3.0ch02	41179620	41179643	-	24	24.241895	-4.431753	0.9203259	-4.815417
SL3.0ch02	41179621	41179643	-	23	9.028467	-6.04361	1.4918093	-4.051194
SL3.0ch02	41764905	41764928	+	24	11.437262	-4.868239	1.145635	-4.249381
SL3.0ch02	41764921	41764944	-	24	27.563005	-6.149933	1.018089	-6.040664
SL3.0ch02	42376057	42376080	+	24	66.246265	-2.869069	0.5120185	-5.603448
SL3.0ch02	42644647	42644670	-	24	46.999524	-2.330317	0.5493313	-4.242098
SL3.0ch02	42676912	42676933	+	22	18.245657	-3.054235	0.7381763	-4.137541
SL3.0ch02	42845317	42845340	-	24	83.952381	-3.4106	0.7047197	-4.839654
SL3.0ch02	43067040	43067063	-	24	120.85243	-2.646078	0.4576753	-5.781561
SL3.0ch02	44895066	44895089	+	24	11.41234	-4.449783	1.0923909	-4.073435
SL3.0ch02	44895069	44895092	+	24	16.369294	-5.449208	1.1123289	-4.898918
SL3.0ch02	44946177	44946200	-	24	13.933747	-3.916712	0.9622685	-4.07029
SL3.0ch02	45775632	45775653	+	22	26.080278	-2.728231	0.6371304	-4.28206
SL3.0ch02	46363644	46363667	-	24	7.5504022	-6.761383	1.5139895	-4.465938
SL3.0ch02	46670423	46670446	-	24	78.135659	-1.948429	0.4669417	-4.172746
SL3.0ch02	46977174	46977197	-	24	59.731245	-6.545551	0.8066873	-8.114112
SL3.0ch02	46977176	46977199	-	24	13.761513	-6.647186	1.391079	-4.778439
SL3.0ch02	46988894	46988917	-	24	37.109752	-3.139785	0.6792119	-4.622688
SL3.0ch02	47134977	47134999	-	23	74.607673	-1.965054	0.4697683	-4.183028
SL3.0ch02	47218981	47219002	+	22	61.696094	-2.87881	0.5175209	-5.562694
SL3.0ch02	48077544	48077567	-	24	5.8757995	-6.404798	1.5824389	-4.047422
SL3.0ch02	49913902	49913924	-	23	83.698265	-1.824785	0.4496563	-4.058177
SL3.0ch02	50164060	50164083	+	24	5.97272	-6.431109	1.5801489	-4.069939
SL3.0ch02	50498608	50498631	-	24	7.0906364	-6.680123	1.5345536	-4.353138
SL3.0ch02	52518601	52518624	+	24	51.622876	-4.072931	0.5888171	-6.91714
SL3.0ch02	52518602	52518625	+	24	18.580886	-4.15383	0.8712636	-4.767592
SL3.0ch02	52553182	52553202	+	21	134.21311	-1.784182	0.4264867	-4.183441
SL3.0ch02	52733141	52733164	-	24	132.53677	-2.398545	0.5492707	-4.366781
SL3.0ch02	52733142	52733163	-	22	73.291094	-3.430156	0.5612107	-6.112065
SL3.0ch02	52733142	52733164	-	23	1081.179	-3.342703	0.5561438	-6.010501
SL3.0ch02	52733142	52733165	-	24	221.87096	-3.121157	0.5258309	-5.935667
SL3.0ch02	52733143	52733165	-	23	50.392861	-2.745501	0.5697734	-4.818585
SL3.0ch02	52733144	52733165	-	22	55.018357	-2.753898	0.6067064	-4.539096
SL3.0ch02	52733146	52733169	-	24	22.329624	-4.200007	0.7770609	-5.404991
SL3.0ch02	52733146	52733168	-	23	75.192722	-3.614893	0.5224743	-6.918796
SL3.0ch02	52733147	52733168	-	22	25.653122	-3.685823	0.7615183	-4.840098
SL3.0ch02	52733147	52733169	-	23	15.506186	-3.442736	0.844247	-4.077878
SL3.0ch02	54098194	54098217	+	24	61.631743	-2.209758	0.5299711	-4.169582
SL3.0ch02	54336434	54336457	-	24	22.369533	-8.335568	1.3437091	-6.203402
SL3.0ch02	55029661	55029684	+	24	45.169366	-8.380118	1.2906023	-6.493184
SL3.0ch02	55029662	55029684	+	23	14.217315	-7.679005	1.3911787	-5.519783
SL3.0ch02	55029676	55029699	+	24	5.9321343	-6.411765	1.5827796	-4.050952
SL3.0ch03	93468	93491	+	24	11.323331	-7.341696	1.4408542	-5.095378
SL3.0ch03	93470	93493	+	24	6.1056824	-6.454304	1.5727558	-4.103819
SL3.0ch03	424178	424201	-	24	47.468939	-2.592517	0.5421949	-4.781522
SL3.0ch03	1071196	1071219	+	24	321.07326	-1.999401	0.3942882	-5.070913
SL3.0ch03	2050570	2050593	+	24	22.268068	-8.32446	1.3388014	-6.217845
SL3.0ch03	2402249	2402272	+	24	76.893052	-1.968206	0.4799976	-4.100449
SL3.0ch03	3455305	3455328	-	24	132.61298	-2.1414	0.4712189	-4.544386

SL3.0ch03	3659685	3659708 +	24	61.652705	-2.739304	0.6135311	-4.464817
SL3.0ch03	3672604	3672627 +	24	16.77271	-6.944855	1.374613	-5.052226
SL3.0ch03	3672614	3672636 -	23	51.346531	-8.561245	1.2840931	-6.667153
SL3.0ch03	3672614	3672637 -	24	65.239505	-7.112465	1.4642612	-4.857374
SL3.0ch03	3672614	3672637 +	24	27.286561	-6.750487	1.1827528	-5.707437
SL3.0ch03	3672627	3672650 +	24	27.699766	-7.674562	1.3280232	-5.778936
SL3.0ch03	3672628	3672650 +	23	5.8960924	-6.414454	1.5877508	-4.039963
SL3.0ch03	3672629	3672650 +	22	11.322645	-6.36354	1.423975	-4.468857
SL3.0ch03	3672630	3672653 +	24	6.0899334	-6.465685	1.5938286	-4.0567
SL3.0ch03	3672631	3672654 +	24	9.0965863	-7.044201	1.4959644	-4.708802
SL3.0ch03	3672633	3672656 +	24	11.409047	-7.369994	1.4504584	-5.081148
SL3.0ch03	3779872	3779895 +	24	191.19213	-2.546616	0.4209366	-6.049882
SL3.0ch03	3779946	3779969 +	24	61.325888	-3.345492	0.5241928	-6.382178
SL3.0ch03	3779947	3779967 +	21	81.841626	-1.846154	0.4524496	-4.080352
SL3.0ch03	4241400	4241420 +	21	307.74339	-2.270133	0.518906	-4.374845
SL3.0ch03	4241401	4241421 +	21	59.874319	-2.396659	0.5797724	-4.133792
SL3.0ch03	4346331	4346354 +	24	33.122276	-7.935458	1.3512354	-5.872743
SL3.0ch03	4839072	4839095 -	24	56.234026	-2.423568	0.5523331	-4.387874
SL3.0ch03	39438671	39438694 +	24	137.86165	-2.843415	0.4987321	-5.701286
SL3.0ch03	50330111	50330131 +	21	44.457242	-3.110179	0.7604807	-4.089754
SL3.0ch03	55057307	55057330 -	24	28.624818	-2.871418	0.6945831	-4.134016
SL3.0ch03	55359657	55359680 +	24	11.459508	-4.45698	1.071435	-4.159823
SL3.0ch03	55359664	55359687 +	24	6.5857411	-6.557829	1.5651508	-4.189902
SL3.0ch03	55359674	55359697 +	24	13.366591	-5.705847	1.2711544	-4.488713
SL3.0ch03	60964739	60964762 +	24	29.220541	-3.531438	0.6489616	-5.441675
SL3.0ch03	62019270	62019293 -	24	78.659917	-2.245985	0.4800124	-4.679016
SL3.0ch03	62702445	62702468 +	24	496.84756	-2.224468	0.4026712	-5.524277
SL3.0ch03	62914496	62914519 +	24	92.80328	-1.827247	0.4427486	-4.127052
SL3.0ch03	63257880	63257901 -	22	37.048646	-2.790977	0.6293455	-4.434729
SL3.0ch03	63959019	63959042 +	24	122.34191	-3.386352	0.5474684	-6.185475
SL3.0ch03	65385150	65385172 +	23	54.448341	-2.059688	0.5081243	-4.053513
SL3.0ch03	65421430	65421453 -	24	22.320462	-5.446391	0.9690929	-5.620092
SL3.0ch03	66250468	66250488 +	21	103.60811	-3.025221	0.4886006	-6.191603
SL3.0ch03	66250538	66250558 +	21	25.342404	-3.503109	0.8467275	-4.137232
SL3.0ch03	66811420	66811441 +	22	58.046863	-2.586239	0.5856912	-4.415704
SL3.0ch03	66881988	66882011 +	24	62.99276	-2.938527	0.572428	-5.133444
SL3.0ch03	67005147	67005169 -	23	15.24883	-6.793273	1.3772892	-4.932351
SL3.0ch03	68033558	68033581 +	24	130.59324	-2.195102	0.5181412	-4.236494
SL3.0ch03	68772017	68772038 +	22	37.450126	-2.488156	0.6044933	-4.116102
SL3.0ch03	69079347	69079368 +	22	325.4634	-1.816607	0.3938886	-4.611983
SL3.0ch03	69386934	69386954 +	21	26.181723	-3.566263	0.7092518	-5.028205
SL3.0ch03	69530889	69530912 +	24	38.397056	-2.551257	0.6094742	-4.185996
SL3.0ch03	69917312	69917335 +	24	25.929681	-3.323082	0.6693376	-4.964732
SL3.0ch03	69917313	69917335 +	23	24.87524	-3.44063	0.7041259	-4.886384
SL3.0ch03	70509217	70509240 -	24	37.126416	-4.274839	0.7302863	-5.853648
SL3.0ch03	70853708	70853730 +	23	13.559164	-7.605165	1.4021249	-5.424028
SL3.0ch03	70853715	70853737 -	23	8.8824524	-7.004632	1.4800225	-4.732788
SL3.0ch03	70853756	70853779 -	24	78.676875	-9.181581	1.2717379	-7.219711
SL3.0ch03	70853757	70853779 -	23	52.668062	-9.567398	1.2838706	-7.451996
SL3.0ch03	70853758	70853779 -	22	13.365323	-7.582341	1.4099319	-5.377807
SL3.0ch03	70853758	70853780 +	23	10.673689	-6.263399	1.4939914	-4.192393
SL3.0ch03	70853758	70853780 -	23	10.067223	-6.182278	1.4416435	-4.288354

SL3.0ch03	70853759	70853781 -	23	30.940931	-8.801654	1.3140778	-6.69797
SL3.0ch03	70853759	70853782 -	24	97.959272	-7.598366	0.8561241	-8.875309
SL3.0ch03	70853759	70853780 -	22	9.0717496	-7.025502	1.4727754	-4.770247
SL3.0ch03	70853759	70853779 -	21	15.219449	-6.780292	1.4700779	-4.612199
SL3.0ch03	70853760	70853782 -	23	44.697214	-7.461176	1.1435722	-6.524447
SL3.0ch03	70853761	70853784 -	24	11.154327	-7.329236	1.4299035	-5.125686
SL3.0ch03	70945128	70945150 +	23	20.167194	-3.178684	0.7550112	-4.210115
SL3.0ch03	70945136	70945158 +	23	17.711286	-3.831166	0.8363514	-4.580809
SL3.0ch03	70945137	70945158 +	22	37.697034	-3.099464	0.6038613	-5.132742
SL3.0ch03	71506947	71506970 -	24	26.387324	-5.066896	0.8724197	-5.807865
SL3.0ch03	71506948	71506971 -	24	30.179223	-3.237457	0.7092134	-4.564856
SL3.0ch03	72287038	72287061 +	24	89.732649	-2.864934	0.5091932	-5.626418
SL3.0ch04	322786	322809 +	24	75.518839	-3.152713	0.5544794	-5.685898
SL3.0ch04	651881	651904 -	24	14.840112	-5.260533	1.119457	-4.699183
SL3.0ch04	651899	651922 -	24	14.673719	-5.266273	1.1281017	-4.668261
SL3.0ch04	1146174	1146197 +	24	33.692911	-3.099375	0.6081864	-5.096093
SL3.0ch04	4183543	4183566 +	24	45.719666	-2.218065	0.5189599	-4.274059
SL3.0ch04	4756996	4757019 +	24	30.6704	-3.518415	0.6858794	-5.129787
SL3.0ch04	4756997	4757019 +	23	35.568466	-3.572433	0.6697368	-5.334085
SL3.0ch04	4906139	4906162 +	24	47.979618	-2.516065	0.5511987	-4.564716
SL3.0ch04	4906147	4906170 +	24	33.766123	-2.67383	0.6121971	-4.367597
SL3.0ch04	4906156	4906177 +	22	124.0514	-3.020496	0.4871439	-6.20042
SL3.0ch04	4906156	4906179 +	24	47.983644	-2.126056	0.5155912	-4.123531
SL3.0ch04	4906252	4906275 +	24	277.71536	-2.826209	0.5714742	-4.945471
SL3.0ch04	4906981	4907004 +	24	323.11177	-2.4032	0.5516045	-4.356745
SL3.0ch04	4907164	4907184 +	21	34.890873	-3.685712	0.7223248	-5.102569
SL3.0ch04	4907417	4907440 +	24	30.095481	-3.417542	0.737969	-4.63101
SL3.0ch04	4907420	4907440 +	21	33.279961	-3.465034	0.7770643	-4.459135
SL3.0ch04	4907420	4907443 +	24	54.488776	-3.15824	0.6972961	-4.529267
SL3.0ch04	4907421	4907444 +	24	127.08753	-2.654331	0.4696405	-5.651837
SL3.0ch04	4907422	4907442 +	21	1128.1261	-2.440942	0.5201923	-4.692384
SL3.0ch04	4907428	4907451 +	24	168.69702	-2.485926	0.5399462	-4.604026
SL3.0ch04	4907430	4907451 +	22	36.104888	-2.606331	0.5756071	-4.527968
SL3.0ch04	4908085	4908107 +	23	103.17564	-2.329233	0.5098416	-4.568542
SL3.0ch04	4908088	4908112 +	25	121.05523	-3.276817	0.5745222	-5.703551
SL3.0ch04	4908089	4908112 +	24	1365.9592	-2.345692	0.3739476	-6.272782
SL3.0ch04	4908147	4908167 +	21	28.222127	-3.630986	0.87184	-4.164739
SL3.0ch04	4909436	4909459 +	24	36.987	-2.331985	0.5628696	-4.143029
SL3.0ch04	5696405	5696428 -	24	40.812278	-2.587987	0.5535849	-4.674959
SL3.0ch04	6507879	6507902 +	24	63.678684	-2.74124	0.6342959	-4.321706
SL3.0ch04	7685453	7685476 +	24	47.998586	-6.557833	0.8886198	-7.379796
SL3.0ch04	7685454	7685476 +	23	37.735182	-7.211307	1.2307767	-5.859151
SL3.0ch04	7685471	7685494 -	24	6.3558582	-6.511347	1.5622869	-4.16783
SL3.0ch04	7685475	7685498 -	24	8.9951219	-7.014439	1.4730276	-4.76192
SL3.0ch04	7718929	7718952 +	24	105.07229	-7.684398	0.8521102	-9.01808
SL3.0ch04	7718931	7718954 +	24	62.395451	-8.844105	1.2797659	-6.910721
SL3.0ch04	7718931	7718952 +	22	13.563708	-7.613506	1.4008255	-5.435014
SL3.0ch04	7718932	7718955 +	24	10.444386	-7.240795	1.4557744	-4.973844
SL3.0ch04	7718933	7718956 +	24	59.62447	-7.880479	1.1300544	-6.97354
SL3.0ch04	7718933	7718955 +	23	22.85488	-6.455195	1.1933656	-5.409235
SL3.0ch04	7718934	7718957 +	24	17.893323	-8.006386	1.3643341	-5.868347
SL3.0ch04	7718934	7718955 +	22	8.0304608	-6.845719	1.5091939	-4.53601

SL3.0ch04	7718934	7718956	+	23	15.535648	-6.826837	1.3743365	-4.967369
SL3.0ch04	7718936	7718956	+	21	6.7592892	-6.596256	1.5548837	-4.242283
SL3.0ch04	7718937	7718960	+	24	66.276958	-7.302009	1.6593183	-4.400608
SL3.0ch04	7718938	7718960	+	23	7.9741261	-6.84011	1.5007696	-4.557735
SL3.0ch04	7718938	7718959	+	22	11.572821	-6.395024	1.41923	-4.505981
SL3.0ch04	7718939	7718962	+	24	837.39809	-7.078737	1.0418409	-6.794451
SL3.0ch04	7718939	7718961	+	23	7.2235988	-6.699901	1.5235171	-4.397654
SL3.0ch04	7718939	7718960	+	22	6.4685277	-6.526556	1.6076137	-4.059779
SL3.0ch04	7718940	7718963	+	24	8.4384357	-6.928139	1.4871778	-4.658581
SL3.0ch04	7718941	7718963	+	23	8.0507537	-6.852565	1.5004868	-4.566895
SL3.0ch04	7718942	7718966	+	25	11.323331	-7.341696	1.4408542	-5.095378
SL3.0ch04	7718942	7718962	+	21	32.144913	-6.360163	1.1043695	-5.759089
SL3.0ch04	7718943	7718966	+	24	243.41386	-6.877154	1.1229384	-6.124249
SL3.0ch04	7718944	7718966	+	23	54.850396	-6.032024	1.3632728	-4.424664
SL3.0ch04	7718958	7718981	-	24	32.965407	-6.407634	1.0243165	-6.255522
SL3.0ch04	7718961	7718984	-	24	30.48653	-4.327446	0.7221048	-5.992823
SL3.0ch04	12441214	12441237	-	24	30.342972	-2.629441	0.6390206	-4.114799
SL3.0ch04	43292343	43292366	+	24	48.86895	-2.257279	0.512459	-4.404799
SL3.0ch04	58636820	58636843	+	24	21.397631	-7.299335	1.3506884	-5.40416
SL3.0ch04	58636821	58636843	+	23	32.665287	-5.984183	0.9189013	-6.512324
SL3.0ch04	58636824	58636847	+	24	136.15041	-5.351904	0.5766176	-9.281549
SL3.0ch04	58636825	58636848	+	24	7.2641846	-6.715453	1.5294001	-4.390907
SL3.0ch04	58636825	58636847	+	23	74.021153	-6.393516	0.7409076	-8.629303
SL3.0ch04	58636827	58636847	+	21	8.3369713	-6.895694	1.5221266	-4.530302
SL3.0ch04	59990463	59990484	+	22	15.88143	-4.134043	0.9497372	-4.352828
SL3.0ch04	60516539	60516562	-	24	9.0665195	-6.030285	1.4601157	-4.130005
SL3.0ch04	61649799	61649822	+	24	36.173006	-2.676763	0.640567	-4.17874
SL3.0ch04	62324099	62324122	-	24	72.474332	-2.610293	0.5354801	-4.874678
SL3.0ch04	62403115	62403138	-	24	15.621449	-7.811651	1.3790418	-5.66455
SL3.0ch04	62769280	62769303	-	24	87.962677	-2.316247	0.5713974	-4.053653
SL3.0ch04	63265449	63265472	+	24	6.9531302	-6.641778	1.5361331	-4.323699
SL3.0ch04	64318036	64318059	+	24	21.626948	-3.114425	0.7156038	-4.352164
SL3.0ch04	64604728	64604751	+	24	53.422026	-2.683178	0.5424817	-4.946117
SL3.0ch04	65977324	65977344	+	21	128.6901	-2.823957	0.6503122	-4.342463
SL3.0ch04	65990634	65990657	+	24	90.311885	-2.449794	0.4963714	-4.935406
SL3.0ch04	65990639	65990662	+	24	53.256916	-2.079303	0.5001981	-4.156959
SL3.0ch05	229779	229802	+	24	43.481778	-3.002451	0.5698893	-5.268481
SL3.0ch05	367950	367973	-	24	22.288361	-8.326719	1.3385922	-6.220505
SL3.0ch05	367963	367986	-	24	16.162386	-7.863031	1.3736487	-5.724193
SL3.0ch05	367968	367991	-	24	8.7652391	-6.980821	1.4772328	-4.725607
SL3.0ch05	367972	367995	-	24	38.833885	-9.126788	1.2985565	-7.028411
SL3.0ch05	861799	861822	+	24	49.131986	-9.467536	2.1134446	-4.479671
SL3.0ch05	3103100	3103123	-	24	38.686594	-2.575436	0.5795169	-4.444109
SL3.0ch05	3383397	3383420	+	24	14.375817	-4.468021	0.9952789	-4.489216
SL3.0ch05	3936014	3936034	+	21	246.4393	-2.273892	0.4460846	-5.097445
SL3.0ch05	5814399	5814420	-	22	30.472188	-3.03528	0.6716397	-4.519209
SL3.0ch05	14632723	14632746	+	24	53.224908	-2.625024	0.548216	-4.788303
SL3.0ch05	16399383	16399406	-	24	61.377048	-2.405816	0.5018956	-4.793459
SL3.0ch05	34101470	34101496	-	27	40.211292	-3.316747	0.6900296	-4.806674
SL3.0ch05	37130558	37130581	+	24	10.526324	-4.715499	1.170574	-4.028365
SL3.0ch05	57208155	57208178	-	24	9.9440341	-7.17144	1.4717959	-4.872578
SL3.0ch05	57208162	57208185	+	24	11.437848	-6.39055	1.4523706	-4.400083

SL3.0ch05	58967802	58967825	-	24	43.534842	-2.287555	0.544051	-4.204671
SL3.0ch05	58980187	58980210	+	24	38.182442	-2.801236	0.5951302	-4.706929
SL3.0ch05	61743648	61743671	+	24	56.838442	-2.276042	0.5312734	-4.284126
SL3.0ch05	61747120	61747140	+	21	49.800482	-2.745757	0.6314874	-4.348079
SL3.0ch05	61755462	61755485	+	24	91.011804	-2.420348	0.500312	-4.837678
SL3.0ch05	62065565	62065588	-	24	11.241474	-6.343362	1.4246974	-4.452428
SL3.0ch05	63182946	63182969	+	24	39.21762	-2.707061	0.574546	-4.711651
SL3.0ch05	63182947	63182970	+	24	177.09551	-1.997868	0.4858826	-4.111833
SL3.0ch05	63271426	63271449	+	24	55.696852	-3.884704	0.5961178	-6.516671
SL3.0ch05	63799160	63799183	+	24	112.09442	-3.174636	0.5085272	-6.242804
SL3.0ch06	131808	131831	+	24	104.42412	-3.930326	0.6157815	-6.382663
SL3.0ch06	131823	131846	-	24	38.890931	-3.763287	0.6393515	-5.8861
SL3.0ch06	2280440	2280461	-	22	126.55538	-2.110252	0.4470098	-4.720818
SL3.0ch06	2280443	2280464	-	22	297.55974	-2.402153	0.3898969	-6.160996
SL3.0ch06	2280505	2280528	+	24	70.086457	-2.481522	0.5130403	-4.836895
SL3.0ch06	2280511	2280534	-	24	24.085423	-3.205472	0.6855848	-4.675529
SL3.0ch06	2301675	2301698	-	24	117.78285	-2.078177	0.480385	-4.326066
SL3.0ch06	21049746	21049769	-	24	62.171371	-3.710811	0.5466471	-6.788311
SL3.0ch06	24169979	24170002	-	24	225.98686	-3.584557	0.5662137	-6.33075
SL3.0ch06	24169980	24170002	-	23	76.314433	-3.108593	0.5727095	-5.42787
SL3.0ch06	24169981	24170005	+	25	26.182964	-2.987781	0.7235358	-4.129417
SL3.0ch06	32834332	32834355	+	24	65.114488	-2.88771	0.5233659	-5.517574
SL3.0ch06	35960351	35960371	-	21	7.2190549	-6.684784	1.5870269	-4.212143
SL3.0ch06	36080991	36081014	+	24	44.010481	-2.733098	0.5628244	-4.856041
SL3.0ch06	37396280	37396303	-	24	16.709896	-3.562968	0.800228	-4.452441
SL3.0ch06	39819610	39819629	-	20	7.9898751	-6.833044	1.5424357	-4.430035
SL3.0ch06	40743393	40743416	+	24	19.30268	-3.365886	0.7410873	-4.541821
SL3.0ch06	40830982	40831056	+	75	88.899007	-2.784183	0.6445037	-4.319886
SL3.0ch06	41682094	41682117	+	24	45.605744	-2.218629	0.5257553	-4.21989
SL3.0ch06	41726637	41726660	+	24	53.371539	-3.771736	0.6466538	-5.832698
SL3.0ch06	41727221	41727244	-	24	39.137884	-3.072328	0.6488151	-4.73529
SL3.0ch06	41795445	41795470	-	26	20.406234	-3.500184	0.8235553	-4.250089
SL3.0ch06	42500430	42500452	-	23	239.53119	-1.910058	0.4381474	-4.359396
SL3.0ch06	42798196	42798219	-	24	120.04136	-2.211861	0.482177	-4.587239
SL3.0ch06	43040232	43040255	+	24	51.974541	-2.291844	0.5632148	-4.069218
SL3.0ch06	43492438	43492461	-	24	30.69462	-3.655607	0.7571172	-4.828324
SL3.0ch06	43492439	43492462	-	24	18.906418	-3.609619	0.8254028	-4.373161
SL3.0ch06	43492441	43492461	-	21	10.020082	-6.171442	1.4862862	-4.152256
SL3.0ch06	43492441	43492464	-	24	138.05632	-5.21924	0.5529257	-9.439315
SL3.0ch06	43492442	43492465	-	24	50.667781	-3.385661	0.6510776	-5.200089
SL3.0ch06	43492444	43492465	-	22	27.037073	-5.385137	0.8724063	-6.172739
SL3.0ch06	43492450	43492474	-	25	14.94554	-4.840318	1.0539858	-4.592394
SL3.0ch06	44473383	44473405	+	23	24.088027	-3.491812	0.7774133	-4.491577
SL3.0ch06	44473384	44473406	+	23	45.416965	-3.388177	0.7394067	-4.582291
SL3.0ch06	44473387	44473408	+	22	14.311039	-4.104949	0.9576371	-4.286539
SL3.0ch06	44473406	44473429	-	24	31.43206	-3.647829	0.7805469	-4.673428
SL3.0ch06	44473406	44473430	-	25	25.655212	-3.626222	0.8042025	-4.50909
SL3.0ch06	44476283	44476306	-	24	164.42381	-1.892058	0.452662	-4.179848
SL3.0ch06	44737617	44737639	-	23	61.817322	-2.048048	0.487244	-4.203332
SL3.0ch06	44928008	44928029	-	22	131.72134	-2.18441	0.4361666	-5.0082
SL3.0ch06	45080706	45080729	+	24	10.902221	-4.334042	1.0731951	-4.038448
SL3.0ch06	46349093	46349116	+	24	27.287332	-8.612618	1.3379736	-6.437062

SL3.0ch06	49180670	49180693	-	24	35.070856	-2.345814	0.5776839	-4.060722
SL3.0ch06	49180676	49180699	-	24	35.448059	-3.836728	0.6425259	-5.97132
SL3.0ch07	657627	657649	-	23	72.337863	-2.055917	0.49538	-4.150181
SL3.0ch07	747895	747916	-	22	101.24376	-1.930314	0.4625652	-4.173063
SL3.0ch07	2106387	2106410	+	24	29.094122	-3.035237	0.7175509	-4.229996
SL3.0ch07	2106398	2106421	+	24	6.7435402	-6.606723	1.5459579	-4.273546
SL3.0ch07	2408072	2408091	+	20	21.475044	-3.425597	0.7796468	-4.393781
SL3.0ch07	2408072	2408092	+	21	46.522421	-2.239644	0.5309761	-4.217975
SL3.0ch07	2658411	2658434	-	24	889.07952	-1.792952	0.4116188	-4.355855
SL3.0ch07	2672406	2672429	-	24	77.816603	-2.665742	0.5101804	-5.225097
SL3.0ch07	3316190	3316210	-	21	22.875272	-3.27479	0.7217815	-4.537094
SL3.0ch07	3538062	3538085	-	24	158.47256	-1.835321	0.4102143	-4.474055
SL3.0ch07	3598332	3598355	+	24	166.73969	-2.152997	0.4709448	-4.571654
SL3.0ch07	3936084	3936107	-	24	38.547668	-9.117249	1.2987993	-7.019752
SL3.0ch07	3936086	3936107	-	22	75.862238	-9.127436	1.2718722	-7.176378
SL3.0ch07	3936101	3936124	-	24	10.939507	-6.317554	1.4451168	-4.371657
SL3.0ch07	3936105	3936128	+	24	9.3467621	-7.082518	1.4858377	-4.766684
SL3.0ch07	4065732	4065755	+	24	18.838884	-3.811071	0.87168	-4.372099
SL3.0ch07	4490555	4490577	+	23	6.3198163	-6.51379	1.5654589	-4.160946
SL3.0ch07	4490555	4490578	+	24	19.303948	-6.273282	1.2245856	-5.122779
SL3.0ch07	4490558	4490581	+	24	183.9195	-6.762689	1.359741	-4.973512
SL3.0ch07	4490573	4490596	-	24	19.677913	-5.712241	1.0799768	-5.289225
SL3.0ch07	8977333	8977356	+	24	36.759963	-3.362021	0.73005	-4.605193
SL3.0ch07	39127581	39127604	+	24	50.059526	-2.582846	0.524863	-4.920991
SL3.0ch07	40992844	40992866	+	23	17.598098	-5.02849	1.1504273	-4.370975
SL3.0ch07	55288157	55288180	+	24	47.232914	-2.888887	0.5776087	-5.001459
SL3.0ch07	55289118	55289141	-	24	34.03271	-4.534589	0.7170221	-6.324198
SL3.0ch07	55289118	55289140	-	23	18.547507	-4.080038	0.8636988	-4.723913
SL3.0ch07	56184354	56184377	+	24	18.73222	-3.110584	0.7633571	-4.074874
SL3.0ch07	56869957	56869980	+	24	17.238992	-3.352264	0.818586	-4.095189
SL3.0ch07	56869960	56869980	+	21	14.00513	-4.11416	0.9248579	-4.448424
SL3.0ch07	56869960	56869983	+	24	52.450507	-3.661903	0.5762387	-6.354836
SL3.0ch07	58303188	58303208	-	21	49.777219	-3.504524	0.7913338	-4.42863
SL3.0ch07	59000182	59000204	+	23	316.25863	-1.616293	0.3848091	-4.200247
SL3.0ch07	60649291	60649314	+	24	6.8765026	-6.627413	1.5373664	-4.310887
SL3.0ch07	62754745	62754768	+	24	26.392556	-2.731794	0.6662248	-4.100408
SL3.0ch07	64418950	64418973	-	24	12.529598	-4.252823	1.0023857	-4.242701
SL3.0ch07	64418955	64418978	-	24	9.2452977	-7.053412	1.4679694	-4.804877
SL3.0ch07	64418956	64418979	-	24	12.898317	-6.559374	1.4029019	-4.675576
SL3.0ch07	64418957	64418980	-	24	11.261767	-6.34842	1.4212778	-4.466699
SL3.0ch07	64418958	64418981	-	24	22.423273	-4.838019	0.8508961	-5.685792
SL3.0ch07	64418969	64418992	-	24	43.629752	-3.988623	0.5964966	-6.686748
SL3.0ch07	64418969	64418991	-	23	44.428164	-3.841823	0.5928076	-6.480725
SL3.0ch07	64547714	64547737	-	24	47.43227	-2.408426	0.5929059	-4.062071
SL3.0ch07	65406146	65406167	+	22	396.71705	-1.788564	0.3874705	-4.616
SL3.0ch07	66030955	66030978	+	24	322.32714	-2.044952	0.3809991	-5.367341
SL3.0ch07	66368328	66368351	-	24	9.8425697	-7.144232	1.4546451	-4.911323
SL3.0ch07	66441867	66441887	+	21	227.92674	-1.782309	0.395414	-4.50745
SL3.0ch07	67214285	67214309	-	25	22.377486	-3.928041	0.8195691	-4.792813
SL3.0ch07	67214285	67214308	-	24	20.915085	-3.833624	0.8785518	-4.363572
SL3.0ch07	67247966	67247986	+	21	59.897071	-2.040769	0.5049871	-4.04123
SL3.0ch08	961450	961473	-	24	209.96206	-1.904695	0.4428518	-4.300976

SL3.0ch08	1215506	1215527	-	22	154.44121	-2.103264	0.4864394	-4.323795
SL3.0ch08	23957829	23957850	-	22	78.271607	-2.411634	0.5475466	-4.404437
SL3.0ch08	27673823	27673851	-	29	31.479948	-2.897659	0.6888092	-4.206766
SL3.0ch08	29026339	29026362	+	24	170.10651	-1.89151	0.4464962	-4.236341
SL3.0ch08	29339471	29339494	-	24	55.513064	-2.503215	0.5302338	-4.720965
SL3.0ch08	55458111	55458134	+	24	50.187254	-2.72543	0.6601014	-4.128804
SL3.0ch08	56336274	56336297	+	24	20.513593	-3.941069	0.8130803	-4.847085
SL3.0ch08	59087203	59087226	+	24	25.97723	-6.674466	1.4223334	-4.692617
SL3.0ch08	59285962	59285985	-	24	12.724769	-6.539291	1.4044139	-4.656242
SL3.0ch08	60641687	60641710	-	24	29.234213	-4.208025	0.769994	-5.46501
SL3.0ch08	61395372	61395395	-	24	136.26682	-3.038049	0.5840814	-5.201414
SL3.0ch08	62030433	62030456	-	24	92.608674	-2.553111	0.5337099	-4.783705
SL3.0ch08	62290639	62290660	+	22	132.89247	-1.955517	0.4693733	-4.16623
SL3.0ch08	62533151	62533174	+	24	77.836778	-2.385482	0.5680528	-4.199402
SL3.0ch08	62847726	62847746	-	21	14.625313	-4.474577	0.991795	-4.511595
SL3.0ch08	64795400	64795423	+	24	17.052376	-3.822552	0.8904101	-4.293024
SL3.0ch08	65265036	65265059	-	24	269.40448	-2.067668	0.4337296	-4.767182
SL3.0ch09	466784	466807	+	24	28.467474	-6.803395	1.1856346	-5.738188
SL3.0ch09	605160	605183	-	24	45.668275	-2.922864	0.585979	-4.988002
SL3.0ch09	830558	830578	+	21	39.696434	-2.618619	0.6421294	-4.078024
SL3.0ch09	941501	941524	-	24	38.084022	-3.006394	0.6494859	-4.628883
SL3.0ch09	941510	941533	+	24	29.499532	-2.452542	0.5948865	-4.122706
SL3.0ch09	1550383	1550406	+	24	15.831039	-7.827743	1.3837133	-5.657055
SL3.0ch09	1550414	1550437	-	24	13.160277	-7.571937	1.4100407	-5.370013
SL3.0ch09	2167827	2167847	+	21	44.533559	-2.172619	0.5283016	-4.112459
SL3.0ch09	3237199	3237220	+	22	58.324652	-2.228617	0.5085881	-4.381969
SL3.0ch09	3988540	3988563	-	24	49.199831	-2.276268	0.5145436	-4.423858
SL3.0ch09	4345711	4345733	+	23	75.838554	-1.963433	0.4857062	-4.04243
SL3.0ch09	5152444	5152467	+	24	26.824013	-5.726181	1.1579893	-4.944934
SL3.0ch09	7434427	7434450	-	24	218.3419	-8.764327	1.1978681	-7.316605
SL3.0ch09	8710864	8710887	+	24	24.794573	-4.992765	0.9134205	-5.466009
SL3.0ch09	8710868	8710891	+	24	44.545865	-5.808512	0.8321517	-6.980112
SL3.0ch09	8710872	8710894	+	23	14.683571	-5.880522	1.2700189	-4.630264
SL3.0ch09	8710873	8710896	+	24	15.191752	-5.302935	1.136453	-4.666216
SL3.0ch09	9816372	9816395	+	24	32.626013	-3.184595	0.6127752	-5.197003
SL3.0ch09	13405417	13405440	+	24	7.9944189	-6.847203	1.4981509	-4.570436
SL3.0ch09	24991567	24991590	-	24	14.001866	-4.170799	1.0008306	-4.167337
SL3.0ch09	57216366	57216389	+	24	39.353228	-2.236448	0.5448375	-4.104799
SL3.0ch09	62246012	62246035	-	24	42.820983	-2.435273	0.6017977	-4.046664
SL3.0ch09	64009869	64009892	-	24	13.847974	-5.105254	1.1084151	-4.605905
SL3.0ch09	64170082	64170105	-	24	19.959489	-4.656408	0.8807707	-5.286742
SL3.0ch09	64219778	64219801	+	24	21.159923	-4.300552	0.8144157	-5.280537
SL3.0ch09	65526576	65526599	+	24	101.29823	-1.765984	0.4286452	-4.119921
SL3.0ch09	65526593	65526615	-	23	36.345313	-2.361458	0.5633133	-4.192087
SL3.0ch09	65526594	65526615	-	22	455.22367	-3.125953	0.452937	-6.901519
SL3.0ch09	65526594	65526617	-	24	118.3905	-2.318668	0.491742	-4.715213
SL3.0ch09	65943239	65943262	+	24	220.38399	-1.919117	0.4119423	-4.658704
SL3.0ch09	67016561	67016581	-	21	23.186249	-5.912455	1.030858	-5.735469
SL3.0ch09	67715944	67715967	+	24	264.94558	-1.788134	0.3963638	-4.511346
SL3.0ch09	68416837	68416860	+	24	129.69988	-1.830755	0.4537407	-4.034804
SL3.0ch09	68469157	68469180	+	24	159.46843	-2.272	0.5229222	-4.344815
SL3.0ch09	69181820	69181843	-	24	285.37914	-1.845618	0.4399438	-4.195123

SL3.0ch09	69775666	69775689	-	24	129.6274	-2.334325	0.4467439	-5.225196
SL3.0ch09	70069346	70069368	+	23	11.760107	-6.421055	1.4135333	-4.542556
SL3.0ch09	70069369	70069392	+	24	6.0696405	-6.456846	1.5802895	-4.085863
SL3.0ch09	70069396	70069419	+	24	56.677844	-9.67721	1.3062025	-7.40866
SL3.0ch09	70069396	70069416	+	21	27.887776	-6.751831	1.1841069	-5.702045
SL3.0ch09	70069400	70069423	+	24	6.2228958	-6.48902	1.566287	-4.142932
SL3.0ch09	70168227	70168248	-	22	68.108302	-2.460835	0.5975526	-4.118189
SL3.0ch09	70545233	70545255	+	23	7.6112808	-6.783589	1.5199039	-4.463169
SL3.0ch09	70545255	70545278	-	24	26.856947	-8.597811	1.3248901	-6.489452
SL3.0ch09	70545259	70545282	-	24	13.369867	-7.59071	1.4003928	-5.420414
SL3.0ch09	70545261	70545282	-	22	6.569992	-6.568557	1.5522772	-4.231561
SL3.0ch09	70545264	70545287	+	24	33.701952	-8.927524	1.3187968	-6.769446
SL3.0ch09	70545264	70545287	-	24	7.7848289	-6.816472	1.515568	-4.497635
SL3.0ch09	70545265	70545287	+	23	31.921341	-8.845474	1.3104227	-6.750092
SL3.0ch09	70545266	70545287	+	22	8.7174126	-5.984829	1.4719567	-4.0659
SL3.0ch09	70545268	70545291	+	24	9.5969378	-7.119823	1.4765264	-4.822009
SL3.0ch09	70545268	70545290	+	23	8.4744776	-6.926609	1.4886577	-4.652923
SL3.0ch09	70545269	70545291	+	23	10.61339	-7.253917	1.4393296	-5.039789
SL3.0ch09	70860743	70860763	-	21	707.66632	-1.740843	0.4063459	-4.284141
SL3.0ch09	71279307	71279326	+	20	41.462772	-2.559649	0.5803709	-4.410369
SL3.0ch09	72358122	72358143	+	22	15.512744	-6.819924	1.3794702	-4.943872
SL3.0ch09	72470247	72470270	+	24	10.937496	-6.326176	1.4709563	-4.300723
SL3.0ch09	72470257	72470280	+	24	8.5196072	-6.952212	1.531357	-4.539903
SL3.0ch09	72470262	72470285	+	24	10.714854	-7.278906	1.4574234	-4.994366
SL3.0ch10	3994028	3994051	+	24	30.462369	-3.378524	0.6539947	-5.16598
SL3.0ch10	4399552	4399574	-	23	140.78515	-1.800967	0.409304	-4.400072
SL3.0ch10	4504435	4504458	+	24	48.682388	-3.137767	0.6323076	-4.962405
SL3.0ch10	8992854	8992877	+	24	34.211684	-2.72137	0.6452772	-4.217366
SL3.0ch10	26841941	26841964	+	24	69.716704	-2.136681	0.5123388	-4.170445
SL3.0ch10	28867433	28867456	-	24	47.493637	-2.275293	0.520585	-4.370646
SL3.0ch10	46219562	46219584	+	23	44.520515	-2.113303	0.5187116	-4.074139
SL3.0ch10	46478676	46478699	+	24	177.9027	-2.017458	0.4781097	-4.219654
SL3.0ch10	47052628	47052651	-	24	151.0307	-1.894332	0.4577349	-4.138491
SL3.0ch10	50322860	50322883	+	24	41.050098	-2.390056	0.5837366	-4.094409
SL3.0ch10	50323020	50323043	+	24	73.730598	-2.664032	0.5904607	-4.511785
SL3.0ch10	55662187	55662209	+	23	43.861107	-2.508773	0.5961187	-4.208512
SL3.0ch10	58289285	58289304	-	20	143.57686	-3.086469	0.6581449	-4.68965
SL3.0ch10	60538404	60538427	+	24	24.190782	-4.396903	0.8193155	-5.366557
SL3.0ch10	60538406	60538429	-	24	31.1944	-5.945785	0.9262217	-6.419398
SL3.0ch10	60538409	60538432	-	24	11.036428	-6.331516	1.4495127	-4.368031
SL3.0ch10	61325882	61325905	-	24	207.38965	-1.819603	0.4297933	-4.233669
SL3.0ch10	61459603	61459626	-	24	16.596629	-6.916547	1.3678864	-5.056375
SL3.0ch10	61459618	61459641	-	24	8.3618081	-6.916316	1.491049	-4.638557
SL3.0ch10	62982462	62982482	+	21	104.3823	-2.551407	0.6198755	-4.115999
SL3.0ch10	63318110	63318133	-	24	26.409624	-3.604049	0.7110975	-5.068292
SL3.0ch10	63363011	63363033	-	23	50.630766	-2.109796	0.5089541	-4.145356
SL3.0ch10	63854387	63854410	-	24	26.834829	-3.488899	0.7417134	-4.703836
SL3.0ch10	64314905	64314927	-	23	12.430123	-4.51628	1.0353678	-4.362006
SL3.0ch10	64622178	64622201	-	24	15.496325	-3.819652	0.8554489	-4.465085
SL3.0ch10	64622182	64622205	+	24	15.802154	-4.917656	1.0065518	-4.885646
SL3.0ch10	64622184	64622206	+	23	191.88223	-4.360455	0.5037994	-8.655142
SL3.0ch10	64622190	64622210	-	21	15.067376	-4.841238	1.0032149	-4.825724

SL3.0ch10	64622195	64622218	-	24	11.144553	-6.329197	1.4291328	-4.428698
SL3.0ch10	64682257	64682278	-	22	437.53953	-1.935513	0.4215205	-4.591742
SL3.0ch10	64860100	64860123	-	24	24.215135	-3.468057	0.7801902	-4.445143
SL3.0ch10	65248218	65248242	-	25	13.373167	-5.110241	1.1345275	-4.50429
SL3.0ch10	65248218	65248241	-	24	52.585872	-2.552269	0.556412	-4.587013
SL3.0ch10	65248220	65248243	-	24	62.248242	-3.193215	0.5589673	-5.712705
SL3.0ch11	469630	469653	-	24	41.817592	-2.928044	0.6297295	-4.649684
SL3.0ch11	506504	506527	-	24	9.8176478	-6.163348	1.4507022	-4.248528
SL3.0ch11	506506	506529	-	24	17.295365	-6.983969	1.365212	-5.115666
SL3.0ch11	3250205	3250228	+	24	6.7074983	-6.607395	1.5837748	-4.171928
SL3.0ch11	3465592	3465615	-	24	10.464678	-7.245514	1.4654411	-4.944255
SL3.0ch11	3715332	3715355	-	24	6.9328373	-6.633698	1.5453303	-4.292738
SL3.0ch11	4266107	4266130	+	24	29.044482	-3.443707	0.690971	-4.983867
SL3.0ch11	4266119	4266142	+	24	575.34865	-2.751946	0.547651	-5.025
SL3.0ch11	4266131	4266154	-	24	35.602029	-3.003018	0.6224898	-4.824205
SL3.0ch11	4797546	4797569	-	24	28.0704	-2.874884	0.6680212	-4.303582
SL3.0ch11	4797548	4797571	-	24	38.296662	-2.975667	0.6213034	-4.789394
SL3.0ch11	5122434	5122457	-	24	94.729942	-2.062613	0.4578919	-4.504584
SL3.0ch11	5861207	5861230	+	24	64.941505	-2.317587	0.5727417	-4.046479
SL3.0ch11	7610559	7610582	+	24	228.65413	-1.895715	0.4523699	-4.190631
SL3.0ch11	9254770	9254790	+	21	28.756329	-2.745219	0.6609385	-4.153516
SL3.0ch11	10248503	10248526	-	24	346.08974	-2.036637	0.439298	-4.636117
SL3.0ch11	18852831	18852856	-	26	32.91497	-3.156989	0.7654188	-4.124525
SL3.0ch11	18870681	18870706	-	26	169.59069	-3.124473	0.6549078	-4.770859
SL3.0ch11	18870682	18870706	-	25	130.24645	-3.107145	0.6498848	-4.781071
SL3.0ch11	18870683	18870707	-	25	67.017741	-2.927252	0.6817595	-4.293673
SL3.0ch11	18870683	18870706	-	24	120.16933	-2.654921	0.5653712	-4.695891
SL3.0ch11	18871127	18871152	-	26	32.032069	-2.97288	0.6723292	-4.421762
SL3.0ch11	20730218	20730247	-	30	77.054704	-2.659072	0.5983768	-4.443809
SL3.0ch11	29661950	29661973	+	24	111.98999	-3.203826	0.4618348	-6.937169
SL3.0ch11	29662038	29662061	+	24	106.34977	-2.546452	0.4946521	-5.147965
SL3.0ch11	31209002	31209025	-	24	151.14801	-3.748606	0.6548835	-5.724081
SL3.0ch11	31209310	31209333	-	24	99.933001	-1.916155	0.4498944	-4.259122
SL3.0ch11	31209601	31209623	-	23	152.6645	-1.662494	0.4086094	-4.068663
SL3.0ch11	32229092	32229115	-	24	64.541108	-3.240102	0.6140142	-5.276917
SL3.0ch11	41861551	41861577	+	27	52.440991	-2.803773	0.6698466	-4.185694
SL3.0ch11	41861553	41861579	+	27	71.596227	-2.885133	0.6997663	-4.122996
SL3.0ch11	41861554	41861580	+	27	71.107723	-2.952328	0.6366829	-4.637045
SL3.0ch11	47489809	47489832	+	24	116.91409	-1.982406	0.4575942	-4.332236
SL3.0ch11	49643795	49643818	-	24	86.924142	-2.089625	0.504452	-4.142367
SL3.0ch11	50360155	50360176	-	22	12.716284	-4.256286	1.0385917	-4.098132
SL3.0ch11	51064345	51064366	+	22	41.282746	-2.725358	0.6507541	-4.188
SL3.0ch11	52895677	52895700	-	24	9.7096073	-7.12953	1.4563255	-4.895561
SL3.0ch11	52895682	52895705	+	24	9.0762934	-7.038705	1.484479	-4.741532
SL3.0ch11	52895682	52895705	-	24	7.6676156	-6.789347	1.5092326	-4.498542
SL3.0ch11	53006204	53006227	-	24	106.5726	-3.125894	0.4555833	-6.861301
SL3.0ch11	54148008	54148031	+	24	10.513772	-6.268793	1.4833063	-4.22623
SL3.0ch11	54564820	54564843	+	24	15.40665	-5.924235	1.2516016	-4.733323
SL3.0ch11	54564836	54564859	-	24	38.563332	-8.1521	1.3006783	-6.267575
SL3.0ch11	54564836	54564858	-	23	14.894493	-5.842576	1.2402376	-4.710852
SL3.0ch11	54564840	54564863	-	24	12.888538	-3.702713	0.9121832	-4.059177
SL3.0ch11	54564841	54564864	-	24	14.538223	-5.218389	1.0905953	-4.7849

SL3.0ch11	54741978	54742001 +	24	14.390863	-7.696774	1.3896381	-5.538689
SL3.0ch11	54742065	54742088 +	24	19.466462	-8.122626	1.383298	-5.871928
SL3.0ch11	54742066	54742089 +	24	14.280892	-5.167637	1.1186711	-4.619443
SL3.0ch11	54742067	54742090 +	24	20.334202	-8.186522	1.3707309	-5.972377
SL3.0ch11	54742075	54742098 +	24	27.846445	-8.653742	1.3398264	-6.458854
SL3.0ch11	54832463	54832485 -	23	19.427144	-6.250355	1.2458814	-5.016814
SL3.0ch11	54832465	54832484 -	20	10.249965	-6.203481	1.5058603	-4.11956
SL3.0ch11	55637671	55637694 +	24	35.759423	-3.391878	0.7394343	-4.587125
SL3.0ch12	220523	220542 +	20	6.3964439	-6.529342	1.5590394	-4.188054
SL3.0ch12	220523	220546 +	24	12.930418	-4.285559	1.0171385	-4.213348
SL3.0ch12	220526	220548 +	23	12.101324	-3.90859	0.9684818	-4.035791
SL3.0ch12	736559	736582 -	24	89.297577	-2.050861	0.4489	-4.568636
SL3.0ch12	737568	737591 -	24	18.835154	-4.801688	0.9481746	-5.064139
SL3.0ch12	737570	737591 -	22	6.6826616	-6.581296	1.5534052	-4.23669
SL3.0ch12	738308	738331 -	24	32.08889	-3.170033	0.6530487	-4.854207
SL3.0ch12	738321	738344 -	24	17.588112	-3.698856	0.8256055	-4.480173
SL3.0ch12	738322	738345 -	24	12.077073	-4.539343	1.0567728	-4.295477
SL3.0ch12	2899369	2899388 +	20	180.82919	-3.17002	0.560379	-5.656921
SL3.0ch12	2899369	2899389 +	21	326.192	-2.182942	0.4502404	-4.848392
SL3.0ch12	3073977	3074000 -	24	112.64762	-2.033339	0.4367171	-4.655964
SL3.0ch12	3634188	3634211 -	24	234.00344	-2.111825	0.4895392	-4.313904
SL3.0ch12	3677014	3677036 -	23	21.141059	-2.946725	0.7218492	-4.082189
SL3.0ch12	3677015	3677037 -	23	82.012074	-1.978304	0.4708924	-4.20118
SL3.0ch12	4254342	4254365 -	24	43.524446	-2.263728	0.5421319	-4.175603
SL3.0ch12	4381004	4381027 +	24	62.47341	-2.175854	0.4865261	-4.472224
SL3.0ch12	4738525	4738548 -	24	40.349501	-3.076542	0.5840257	-5.26782
SL3.0ch12	6989075	6989096 -	22	37.069106	-3.351872	0.6439902	-5.204849
SL3.0ch12	9673323	9673342 +	20	42.950771	-2.327616	0.5610781	-4.14847
SL3.0ch12	9673413	9673436 -	24	24.344108	-2.82713	0.6677905	-4.233558
SL3.0ch12	16549457	16549480 -	24	41.978787	-3.161701	0.7710332	-4.100603
SL3.0ch12	31116063	31116086 -	24	6.7187034	-6.581224	1.6001642	-4.112843
SL3.0ch12	32611880	32611903 +	24	6.8156239	-6.603616	1.5781271	-4.184464
SL3.0ch12	40779499	40779522 -	24	5.97272	-6.431109	1.5801489	-4.069939
SL3.0ch12	58686336	58686357 +	22	13.236905	-7.579576	1.4071542	-5.386458
SL3.0ch12	58688193	58688216 -	24	41.179598	-3.918139	0.7207386	-5.436283
SL3.0ch12	58688194	58688216 -	23	25.813057	-4.820904	0.8075749	-5.969606
SL3.0ch12	58688197	58688216 -	20	17.007152	-5.509036	1.1168327	-4.932731
SL3.0ch12	58688197	58688220 -	24	117.2009	-4.044036	0.6078287	-6.653249
SL3.0ch12	58688199	58688220 -	22	56.200536	-4.081676	0.6211139	-6.571541
SL3.0ch12	58688199	58688222 -	24	22.222199	-4.066079	0.7934154	-5.124779
SL3.0ch12	59281113	59281136 +	24	96.050994	-2.235792	0.5474281	-4.084175
SL3.0ch12	61168646	61168669 +	24	214.1974	-1.792559	0.4180362	-4.288049
SL3.0ch12	63542272	63542295 -	24	67.220708	-2.753898	0.5848996	-4.708326
SL3.0ch12	63774550	63774573 +	24	9.6434987	-6.118836	1.4495951	-4.221065
SL3.0ch12	63774574	63774597 +	24	25.845056	-5.070119	0.8620454	-5.881498
SL3.0ch12	63774589	63774612 -	24	26.187506	-7.59697	1.3853268	-5.483883
SL3.0ch12	63774611	63774634 +	24	28.898168	-6.837257	1.2362791	-5.530512
SL3.0ch12	63774652	63774675 -	24	15.595841	-5.931628	1.2728891	-4.659972
SL3.0ch12	63774653	63774675 -	23	8.1725109	-6.892088	1.537591	-4.482394
SL3.0ch12	63993413	63993436 -	24	47.269138	-3.262328	0.615146	-5.303339
SL3.0ch12	63993413	63993435 -	23	49.976774	-2.593425	0.6416845	-4.041589
SL3.0ch12	64612701	64612724 -	24	8.1882599	-6.885617	1.4951923	-4.605171

SL3.0ch12	64612706	64612729 -	24	10.378963	-7.214366	1.4638999	-4.928182
SL3.0ch12	64612706	64612728 -	23	9.4188458	-7.080793	1.4634454	-4.83844
SL3.0ch12	64612707	64612730 +	24	9.6532726	-7.124869	1.4633321	-4.868935
SL3.0ch12	64612710	64612732 -	23	32.414637	-7.890631	1.3441434	-5.870379
SL3.0ch12	64612711	64612734 -	24	214.81058	-9.724751	1.1158476	-8.715125
SL3.0ch12	64612711	64612732 -	22	15.443357	-7.788879	1.4009913	-5.559548
SL3.0ch12	64612711	64612733 -	23	6.3919001	-6.510363	1.5998108	-4.069458
SL3.0ch12	64612712	64612735 -	24	14.442654	-7.69279	1.4055534	-5.47314
SL3.0ch12	64612714	64612736 -	23	20.20124	-8.178424	1.3620062	-6.004689
SL3.0ch12	64612715	64612738 +	24	10.092745	-7.179908	1.4504524	-4.950116
SL3.0ch12	64612715	64612738 -	24	7.2393478	-6.691217	1.5589944	-4.292008
SL3.0ch12	64612716	64612739 -	24	101.03519	-9.539707	1.3024157	-7.324625
SL3.0ch12	64612717	64612738 -	22	91.772107	-10.36519	1.2933366	-8.014305
SL3.0ch12	64612721	64612744 -	24	10.782394	-7.267881	1.4679896	-4.950908
SL3.0ch12	64612722	64612743 -	22	68.845888	-9.952989	2.1419902	-4.646608
SL3.0ch12	64612722	64612742 -	21	7.4534817	-6.740573	1.5206664	-4.432644
SL3.0ch12	64612723	64612746 -	24	13.707876	-7.613938	1.443224	-5.275645
SL3.0ch12	64782099	64782120 -	22	410.18923	-1.54195	0.3768044	-4.092175
SL3.0ch12	65106231	65106254 +	24	28.214724	-4.584084	0.8618462	-5.318912
SL3.0ch12	65106233	65106256 +	24	24.292353	-2.910861	0.6870574	-4.236707
SL3.0ch12	65642997	65643017 +	21	426.75754	-3.041111	0.5559451	-5.470165
SL3.0ch12	65897976	65897999 -	24	179.35525	-2.747013	0.4706882	-5.836164
SL3.0ch12	66518496	66518519 +	24	50.730221	-2.393081	0.5679438	-4.213588
SL3.0ch12	66654638	66654661 -	24	23.979288	-2.901008	0.7136524	-4.065016
SL3.0ch12	67765208	67765231 -	24	35.063544	-3.242247	0.6170542	-5.254396
SL3.0ch12	67765264	67765287 -	24	24.38594	-4.74007	0.8339337	-5.683988
SL3.0ch12	67765268	67765291 +	24	59.569484	-5.842546	0.7079056	-8.253284
SL3.0ch12	67765270	67765293 -	24	16.81726	-6.048618	1.2388108	-4.882601
SL3.0ch12	67765271	67765294 +	24	83.785631	-4.45683	0.5723319	-7.787143
SL3.0ch12	67765278	67765299 +	22	13.420993	-5.718858	1.28662	-4.44487

pvalue	padj	control_2_	control_2_	control_11	dcl2_1	dcl2_2
2.92E-05	0.0060662	107	89	29	176	474
1.51E-05	0.0036863	1	3	3	45	21
1.69E-05	0.0040217	30	21	15	106	81
3.26E-05	0.0065624	0	0	0	16	14
3.39E-05	0.0067717	11	5	2	47	41
2.95E-05	0.0061077	47	51	29	199	100
3.82E-08	2.75E-05	3	8	1	55	64
6.27E-06	0.0018816	1	0	0	23	31
5.37E-10	6.46E-07	5	3	3	56	90
3.06E-05	0.0062604	3	1	5	44	25
1.42E-07	8.31E-05	47	49	63	170	570
3.22E-05	0.0064937	47	87	29	202	173
2.73E-07	0.0001473	26	13	8	79	155
2.86E-05	0.0059725	8	8	4	35	53
1.95E-05	0.0044703	95	86	79	332	207
3.99E-05	0.0076662	10	8	10	47	56
3.77E-05	0.0073632	55	69	24	121	267
1.89E-05	0.0043642	0	0	0	16	16
2.76E-06	0.0009773	0	1	1	30	38
3.30E-05	0.0066178	22	43	26	100	134
4.19E-05	0.0079709	7	21	8	36	104
1.21E-05	0.0031039	32	14	6	50	186
3.02E-05	0.0062088	45	88	29	199	179
4.03E-05	0.0077435	4	10	4	57	29
2.87E-06	0.0010092	2	1	0	14	57
2.88E-07	0.0001537	2	4	6	38	70
1.74E-05	0.0041126	6	3	10	22	97
4.34E-10	5.29E-07	2	0	2	76	59
7.48E-06	0.0021637	1	2	2	41	22
1.49E-05	0.0036313	0	2	0	31	26
2.95E-06	0.0010313	14	27	18	118	78
4.94E-05	0.0090251	6	8	1	55	26
1.67E-06	0.0006497	7	12	7	72	50
3.76E-08	2.71E-05	29	35	8	202	123
1.90E-05	0.0043764	17	47	19	127	107
3.45E-05	0.0068463	12	20	4	60	67
7.49E-09	6.68E-06	3	1	0	68	44
1.80E-07	0.0001011	31	8	4	166	104
1.44E-07	8.39E-05	3	0	0	54	38
2.62E-05	0.0055817	2	0	1	25	26
3.99E-12	8.27E-09	7	3	2	74	136
4.68E-05	0.0087039	13	31	9	61	105
4.63E-06	0.0014769	24	31	21	101	119
1.43E-09	1.56E-06	8	20	13	126	114
3.58E-05	0.007066	2	0	1	21	28
5.16E-06	0.0016172	0	2	1	42	22
1.90E-05	0.0043764	12	23	3	39	132
2.20E-07	0.0001209	8	29	10	61	227
2.45E-05	0.0052957	5	1	2	42	24
7.41E-08	4.78E-05	27	39	19	120	226

3.07E-09	3.09E-06	33	59	38	252	234
3.13E-05	0.006373	45	85	37	193	177
1.27E-05	0.0032147	10	4	0	175	174
2.29E-05	0.0050407	1	0	1	39	17
1.30E-10	1.80E-07	5	1	1	67	82
4.70E-05	0.0087187	0	0	0	12	16
4.58E-06	0.0014659	20	25	9	72	118
6.94E-07	0.0003193	0	4	0	44	36
1.76E-06	0.0006759	7	2	5	96	24
4.16E-06	0.0013547	75	57	62	252	216
9.94E-07	0.0004259	5	11	2	31	99
5.16E-05	0.0093194	109	138	75	348	249
4.32E-05	0.0081819	36	101	50	209	230
8.64E-06	0.0024243	43	72	38	165	213
9.41E-06	0.0025825	3	0	0	39	23
9.16E-08	5.70E-05	1	1	0	54	48
2.54E-06	0.0009159	0	0	1	34	28
4.84E-05	0.0089024	0	0	0	32	4
1.48E-05	0.0036252	8	13	3	31	85
4.86E-08	3.36E-05	96	104	55	353	391
1.16E-05	0.0030257	139	201	72	437	472
2.51E-05	0.0054111	0	0	0	25	9
1.17E-06	0.0004863	0	0	0	26	20
3.19E-05	0.0064502	1	2	1	26	24
4.66E-05	0.00867	9	20	5	50	70
1.47E-05	0.0035981	11	16	6	51	72
2.38E-06	0.0008714	65	36	10	137	341
1.34E-07	7.91E-05	49	48	21	161	273
1.08E-05	0.0028586	2	5	0	26	41
1.31E-05	0.0033071	34	14	12	104	94
4.85E-07	0.0002378	1	5	2	40	46
4.72E-05	0.0087214	28	27	18	103	78
1.44E-05	0.0035429	1	19	13	125	53
1.72E-05	0.0040843	33	48	18	121	134
2.37E-05	0.0051732	12	3	3	61	36
8.60E-06	0.0024162	15	14	5	83	50
4.51E-05	0.0084722	4	3	10	24	73
5.21E-08	3.55E-05	88	92	44	398	264
3.35E-05	0.0066894	58	52	25	191	122
2.46E-06	0.0008941	30	21	16	113	99
1.53E-05	0.0037168	148	155	86	401	369
1.42E-06	0.0005688	3	5	7	66	37
9.48E-06	0.0025939	13	8	8	61	55
5.53E-06	0.0017149	13	5	5	52	61
3.57E-05	0.007049	1	0	0	19	23
3.05E-10	3.85E-07	37	23	4	225	259
1.62E-05	0.0038921	16	4	2	54	62
7.51E-07	0.00034	56	38	54	721	94
1.18E-05	0.0030539	1	0	1	52	14
3.61E-06	0.0012125	1479	1652	701	3478	5728
1.87E-05	0.0043165	58	53	18	121	254
1.72E-19	1.49E-15	2	4	2	324	116

9.69E-06	0.0026336	47	8	22	98	243
7.61E-08	4.86E-05	2	0	0	68	41
6.56E-09	5.98E-06	6	1	1	134	28
1.47E-06	0.0005837	3	0	5	107	16
5.10E-05	0.0092355	1	0	0	38	9
2.14E-05	0.0048185	0	2	1	31	22
1.53E-09	1.67E-06	0	1	2	76	55
2.10E-08	1.63E-05	15	25	20	191	87
2.21E-05	0.0049273	13	19	24	100	75
3.51E-05	0.0069485	4	7	4	43	32
1.30E-06	0.0005295	27	13	15	379	31
7.40E-09	6.62E-06	28	54	42	302	180
4.63E-05	0.0086389	0	3	1	40	15
9.64E-07	0.000415	0	3	0	54	26
4.70E-05	0.0087187	2	5	0	23	35
1.85E-05	0.0043002	8	12	6	55	47
7.97E-06	0.002275	0	0	0	19	17
3.01E-05	0.0061962	30	48	38	154	118
4.89E-16	2.22E-12	2	1	2	167	119
1.77E-06	0.0006764	1	0	0	35	30
3.79E-06	0.0012575	5	5	17	104	54
2.88E-05	0.0059931	40	34	35	136	121
2.66E-08	1.98E-05	17	24	15	111	128
5.18E-05	0.0093502	0	0	0	18	11
4.95E-05	0.0090295	40	54	39	183	108
4.70E-05	0.0087199	0	0	0	20	10
1.34E-05	0.0033635	0	0	0	25	11
4.61E-12	9.39E-09	7	12	4	115	110
1.86E-06	0.0007045	1	6	1	63	25
2.87E-05	0.0059851	72	91	56	222	220
1.26E-05	0.0032034	85	62	16	363	161
9.84E-10	1.10E-06	27	12	9	136	163
1.85E-09	1.97E-06	449	259	66	3162	1572
2.93E-09	2.95E-06	105	45	27	677	287
1.45E-06	0.0005755	26	11	12	142	66
5.65E-06	0.0017368	35	11	8	137	85
6.48E-08	4.26E-05	2	4	3	67	36
4.55E-12	9.32E-09	13	24	8	215	119
1.30E-06	0.0005289	7	8	0	81	36
4.54E-05	0.0085159	6	2	2	31	33
3.05E-05	0.0062552	21	36	24	180	61
5.53E-10	6.57E-07	0	0	0	77	36
8.40E-11	1.25E-07	0	1	0	144	80
3.39E-08	2.47E-05	0	0	0	43	27
5.10E-05	0.0092373	0	0	0	14	14
3.48E-07	0.0001798	0	0	0	22	30
4.06E-05	0.0077869	0	0	0	15	14
1.74E-06	0.0006697	11	21	18	115	72
3.96E-07	0.0002002	156	201	116	566	541
5.04E-10	6.10E-07	0	0	0	62	46
4.12E-05	0.0078781	51	36	27	136	128
5.51E-06	0.0017087	62	86	36	202	256

8.01E-06	0.0022816	22	34	7	79	147
4.37E-07	0.0002163	1	0	0	61	24
2.61E-11	4.33E-08	0	0	1	136	110
1.19E-06	0.0004935	0	4	0	215	109
1.15E-08	9.81E-06	0	1	1	93	43
7.52E-09	6.69E-06	0	1	0	101	40
5.35E-05	0.0095766	0	0	0	21	9
7.86E-06	0.0022534	0	0	1	38	18
4.98E-05	0.0090585	0	0	0	25	7
2.49E-06	0.0009028	0	0	0	38	10
3.75E-07	0.0001915	0	0	0	47	13
1.45E-09	1.58E-06	69	99	45	403	329
1.75E-10	2.32E-07	19	12	11	168	97
4.50E-05	0.0084551	37	55	37	167	115
1.22E-05	0.0031203	86	117	170	382	673
3.57E-05	0.0070467	32	14	23	81	130
4.29E-09	4.17E-06	1	0	0	148	29
1.14E-05	0.0029925	12	38	17	141	78
1.19E-08	1.00E-05	51	51	27	192	323
4.32E-05	0.008173	16	6	12	25	134
3.56E-05	0.0070431	5	8	12	40	67
3.18E-05	0.006446	2	2	0	26	25
2.79E-05	0.0058681	0	0	0	12	18
7.17E-06	0.0020868	2	0	0	36	27
5.28E-08	3.58E-05	5	8	5	77	50
2.88E-06	0.0010122	34	48	21	146	138
3.31E-08	2.41E-05	266	214	165	850	914
3.67E-05	0.0071972	59	53	36	180	136
9.22E-06	0.0025425	13	17	6	52	86
6.19E-10	7.21E-07	24	39	20	147	326
5.05E-05	0.0091636	19	30	27	118	78
1.91E-08	1.49E-05	3	1	0	51	51
5.96E-10	6.97E-07	27	39	21	173	230
3.52E-05	0.0069547	7	1	7	22	74
1.01E-05	0.0027127	11	40	13	101	116
2.84E-07	0.0001523	23	23	10	85	152
8.12E-07	0.0003592	0	0	1	39	33
2.27E-05	0.0050054	49	99	31	387	125
3.85E-05	0.0074764	9	24	10	64	74
3.99E-06	0.001312	139	227	154	691	433
4.95E-07	0.0002424	3	9	4	85	34
2.84E-05	0.0059411	13	23	7	60	81
6.88E-07	0.0003174	4	8	6	65	45
1.03E-06	0.0004379	4	6	6	81	31
4.81E-09	4.56E-06	2	12	1	117	57
5.83E-08	3.88E-05	0	0	0	32	32
2.21E-06	0.0008224	0	0	0	31	14
5.21E-13	1.34E-09	0	0	1	256	136
9.19E-14	2.65E-10	0	0	0	155	103
7.54E-08	4.84E-05	0	0	0	28	34
2.76E-05	0.0058126	1	0	0	10	35
1.80E-05	0.0042091	0	0	1	25	22

2.11E-11	3.59E-08	0	0	0	99	55
6.97E-19	5.48E-15	3	0	1	289	188
1.84E-06	0.0006977	0	0	0	22	21
3.98E-06	0.001312	0	0	1	10	53
6.83E-11	1.03E-07	1	0	1	137	82
2.96E-07	0.0001575	0	0	0	34	21
2.55E-05	0.0054682	2	6	7	59	28
4.63E-06	0.0014775	4	3	2	29	44
2.86E-07	0.0001526	5	15	10	94	63
6.33E-09	5.84E-06	3	1	2	105	28
5.00E-06	0.0015745	14	3	5	98	36
1.84E-08	1.45E-05	33	29	20	135	204
1.30E-08	1.09E-05	19	21	18	274	68
2.61E-06	0.0009362	3	0	0	42	28
3.04E-06	0.0010572	2	1	0	57	17
3.47E-07	0.0001798	10	11	6	66	69
1.92E-05	0.004412	19	21	19	101	68
2.90E-07	0.0001547	11	4	4	100	39
9.60E-08	5.94E-05	12	3	6	114	47
5.00E-06	0.0015745	27	13	13	108	77
1.26E-05	0.0031934	18	12	5	80	54
5.63E-10	6.65E-07	31	28	41	225	262
3.73E-05	0.0072949	26	20	19	99	74
7.60E-07	0.0003425	157	31	66	525	552
1.32E-05	0.0033201	200	48	121	905	378
3.35E-07	0.0001748	10	3	6	43	95
3.64E-06	0.0012183	14	4	2	50	71
8.23E-06	0.002326	6	3	11	30	96
5.92E-06	0.0017954	30	6	6	73	136
1.59E-08	1.28E-05	55	53	25	223	256
2.70E-06	0.000959	445	277	524	1293	2636
4.14E-06	0.0013508	96	66	32	198	395
5.96E-06	0.0018025	17	11	10	89	54
4.91E-06	0.001554	66	25	34	250	144
1.17E-08	9.98E-06	54	22	12	198	282
3.55E-10	4.43E-07	604	498	532	2966	2158
3.12E-05	0.0063503	4	1	10	22	85
3.43E-05	0.0068215	19	18	9	78	60
2.94E-06	0.001029	17	17	10	109	55
1.55E-05	0.003742	4	30	27	148	105
1.59E-13	4.39E-10	0	2	2	151	84
4.65E-09	4.45E-06	0	1	1	35	125
3.08E-05	0.0062915	0	0	0	15	15
1.92E-06	0.0007202	0	0	0	23	20
1.91E-19	1.62E-15	0	1	3	295	212
4.82E-12	9.78E-09	0	1	0	151	144
5.48E-08	3.69E-05	0	0	0	45	23
6.56E-07	0.0003061	0	0	0	40	14
3.09E-12	6.61E-09	1	0	1	174	116
6.33E-08	4.17E-05	0	0	2	70	41
4.40E-09	4.24E-06	0	0	0	44	41
5.73E-06	0.001756	0	0	0	16	21

6.79E-07	0.0003145	0	1	0	41	33
2.21E-05	0.0049258	0	0	0	13	18
1.08E-05	0.0028585	0	0	3	218	111
5.17E-06	0.0016195	0	0	0	20	18
6.61E-06	0.0019571	0	0	1	38	19
1.09E-11	2.02E-08	4	11	30	2373	1664
1.09E-05	0.00288	0	0	0	20	15
4.91E-05	0.0090006	0	0	0	7	21
3.18E-06	0.0010957	0	0	0	27	15
4.95E-06	0.0015639	0	0	0	19	19
3.48E-07	0.0001798	0	0	0	22	30
8.46E-09	7.47E-06	0	1	2	26	108
9.11E-10	1.03E-06	1	3	11	668	497
9.66E-06	0.0026271	0	1	5	127	126
3.96E-10	4.89E-07	0	1	2	61	87
2.06E-09	2.17E-06	2	3	6	88	52
3.88E-05	0.0075019	18	9	5	66	52
1.06E-05	0.0028229	22	26	15	115	69
6.51E-08	4.27E-05	1	0	0	79	30
7.40E-11	1.11E-07	1	1	2	113	49
1.67E-20	1.76E-16	3	15	8	493	183
1.13E-05	0.0029565	0	0	0	26	11
6.17E-18	3.81E-14	0	5	2	239	125
5.89E-06	0.0017914	0	0	0	12	25
1.34E-05	0.0033649	1	6	0	30	38
3.63E-05	0.0071377	0	0	1	25	18
2.93E-05	0.0060808	9	23	6	57	78
1.09E-06	0.0004588	22	44	13	127	145
1.47E-08	1.21E-05	0	0	0	41	34
5.04E-05	0.009162	59	40	13	125	184
1.53E-05	0.0037168	0	0	0	17	16
1.35E-05	0.0033731	8	5	4	40	46
7.57E-07	0.0003417	20	20	14	84	115
1.41E-05	0.0034972	39	19	55	104	352
8.00E-07	0.0003561	40	50	17	164	170
3.23E-05	0.006506	22	33	20	107	83
1.38E-07	8.11E-05	13	10	13	127	58
4.96E-10	6.01E-07	0	0	0	65	44
1.04E-08	9.02E-06	0	0	0	47	32
2.29E-06	0.0008455	0	0	0	26	17
2.09E-12	4.63E-09	0	0	0	107	81
7.48E-06	0.0021626	0	0	0	224	41
8.83E-06	0.0024624	12	20	10	66	78
7.15E-06	0.0020847	2	3	0	26	36
3.44E-07	0.0001789	108	151	61	400	475
6.21E-06	0.0018656	9	9	7	39	76
1.68E-06	0.0006521	14	27	15	87	111
1.64E-06	0.0006402	18	35	20	146	90
1.53E-06	0.0006031	15	7	6	43	110
5.62E-05	0.0099827	1	1	1	17	28
1.10E-06	0.0004632	0	0	0	40	12
1.08E-05	0.0028586	1	0	0	49	11

2.61E-05	0.0055765	20	22	13	74	82
2.51E-06	0.0009081	13	8	14	74	74
1.83E-05	0.0042738	19	41	14	118	92
1.37E-05	0.0034247	23	12	13	53	126
1.31E-06	0.0005322	33	53	23	270	97
8.49E-06	0.0023862	0	0	1	26	26
2.46E-06	0.0008941	14	19	7	79	73
3.93E-05	0.0075786	82	149	39	319	294
7.19E-11	1.08E-07	16	9	3	162	90
4.30E-10	5.26E-07	46	28	13	315	166
1.74E-10	2.32E-07	20	12	17	445	71
3.95E-09	3.90E-06	5	5	10	119	57
2.35E-06	0.0008612	61	51	59	320	153
7.23E-10	8.30E-07	100	142	108	691	447
1.32E-06	0.0005338	25	34	21	213	73
2.93E-06	0.001027	9	5	4	56	44
1.52E-05	0.0036935	47	50	63	179	223
1.13E-11	2.06E-08	10	19	6	149	120
2.44E-10	3.15E-07	85	39	14	737	292
5.70E-08	3.82E-05	37	14	10	232	99
3.64E-05	0.0071489	14	8	1	61	46
3.44E-08	2.50E-05	15	27	17	198	79
2.53E-05	0.0054328	0	0	0	7	24
1.20E-06	0.0004959	11	13	18	94	78
8.49E-06	0.0023862	4	3	3	45	28
9.42E-06	0.0025853	0	0	0	10	25
5.58E-06	0.001723	5	4	4	48	34
1.56E-05	0.0037667	52	13	19	95	226
2.44E-05	0.0052942	16	24	19	92	74
5.45E-09	5.14E-06	13	13	3	73	142
2.19E-06	0.0008144	17	5	9	63	89
2.14E-05	0.0048093	4	7	2	22	57
1.30E-05	0.0032941	144	134	89	334	453
4.49E-06	0.0014414	57	75	29	186	234
4.72E-05	0.0087214	19	36	12	80	104
1.38E-06	0.0005542	13	5	0	72	60
1.22E-05	0.0031389	8	1	2	48	34
3.29E-05	0.0066041	1	0	0	12	31
3.75E-21	4.63E-17	18	8	3	399	254
1.99E-07	0.0001104	23	10	2	139	81
6.71E-10	7.77E-07	3	1	1	74	53
4.38E-06	0.0014134	4	0	0	43	27
7.07E-06	0.0020673	11	1	3	59	44
4.60E-06	0.0014703	23	1	6	102	88
1.81E-05	0.0042326	3	1	2	21	38
2.96E-06	0.0010343	15	1	2	84	54
6.51E-06	0.0019379	12	2	1	47	59
2.92E-05	0.00606	67	131	60	266	284
2.63E-05	0.0055986	30	30	27	110	105
5.49E-07	0.000264	62	63	49	222	242
5.38E-05	0.0096306	2	1	1	21	26
1.22E-10	1.70E-07	0	0	0	52	73

4.89E-05	0.008972	10	21	12	74	57
2.35E-09	2.43E-06	3	9	6	94	63
3.32E-05	0.0066488	38	27	35	123	127
3.01E-05	0.0061927	37	78	40	207	147
2.34E-05	0.0051079	3	12	9	104	26
1.92E-05	0.0044151	0	0	0	23	11
1.11E-05	0.0029229	7	4	3	28	56
2.47E-05	0.0053286	22	27	12	90	79
1.33E-05	0.0033283	476	689	305	1375	1527
1.74E-07	9.84E-05	29	32	19	118	170
5.70E-06	0.001749	6	4	6	39	52
7.68E-06	0.0022099	92	101	60	293	243
4.84E-06	0.0015356	62	114	53	242	331
2.22E-12	4.90E-09	0	0	0	114	75
7.16E-13	1.80E-09	0	1	0	194	168
1.23E-05	0.0031521	0	0	1	43	13
1.87E-06	0.0007057	0	0	0	38	11
1.23E-05	0.0031507	2	6	2	78	14
3.17E-05	0.0064264	0	0	0	22	10
3.01E-07	0.0001593	0	2	0	56	37
6.58E-07	0.0003063	0	11	3	502	377
1.23E-07	7.40E-05	0	3	0	50	42
4.12E-06	0.0013464	14	1	9	62	85
8.61E-07	0.0003772	23	19	12	127	72
1.24E-05	0.0031536	1	1	2	6	63
5.69E-07	0.0002712	24	12	7	117	76
2.55E-10	3.27E-07	3	4	4	122	43
2.31E-06	0.0008504	3	2	3	72	18
4.60E-05	0.0086042	8	5	2	36	39
4.22E-05	0.0080293	8	3	1	45	29
8.65E-06	0.002426	3	2	1	34	28
2.09E-10	2.71E-07	11	12	7	178	64
9.48E-06	0.0025939	9	4	16	28	156
2.67E-05	0.0056512	188	243	132	597	435
1.63E-05	0.003895	0	0	0	18	15
4.12E-05	0.0078781	9	15	3	64	42
2.21E-05	0.0049258	3	2	0	34	23
1.55E-06	0.0006069	0	0	0	23	21
2.93E-06	0.001027	1	0	0	43	21
7.94E-06	0.0022691	0	0	1	29	24
1.30E-08	1.09E-05	3	2	1	58	45
2.28E-11	3.85E-08	8	6	6	120	76
9.13E-11	1.33E-07	7	6	9	116	80
4.86E-05	0.0089278	28	12	15	69	100
3.91E-06	0.0012927	234	277	142	849	517
7.99E-08	5.08E-05	148	196	119	705	456
9.05E-07	0.0003931	0	0	0	25	22
6.56E-06	0.0019476	116	161	96	419	344
1.64E-06	0.0006411	1	8	2	37	56
1.28E-05	0.0032413	0	9	2	33	53
5.32E-05	0.0095488	24	39	23	99	107
1.70E-05	0.0040376	126	124	74	295	395

1.53E-05	0.0037168	44	120	54	258	279
1.06E-05	0.0028247	28	51	16	109	169
2.59E-05	0.0055333	13	13	3	42	76
2.27E-05	0.0050063	125	92	49	328	257
2.35E-06	0.0008612	16	32	15	102	105
3.65E-05	0.0071588	5	38	9	108	89
1.25E-06	0.0005134	3	6	1	36	50
2.70E-06	0.0009588	0	1	1	146	1
3.22E-06	0.0011056	1	0	0	42	21
4.63E-08	3.22E-05	9	3	0	74	57
1.98E-07	0.0001098	14	79	24	248	289
1.72E-06	0.000663	51	37	15	146	194
3.10E-05	0.0063119	38	92	67	281	188
2.68E-05	0.0056659	27	53	16	97	175
6.43E-06	0.0019205	4	1	0	33	32
1.76E-05	0.0041598	0	7	2	53	25
1.87E-06	0.0007053	175	139	72	488	455
9.57E-09	8.38E-06	0	1	1	58	72
6.10E-07	0.0002874	20	14	7	142	54
4.54E-05	0.0085159	8	27	8	59	87
3.68E-06	0.0012286	4	22	7	83	71
3.74E-05	0.0073145	12	13	9	70	44
1.54E-08	1.25E-05	0	0	0	35	39
7.87E-08	5.02E-05	0	0	0	47	20
3.91E-05	0.0075614	24	18	17	103	62
1.18E-05	0.003049	30	24	21	99	108
9.70E-06	0.0026336	17	26	19	104	78
5.29E-05	0.0095119	54	34	25	150	115
7.62E-07	0.000343	1	2	1	146	3
2.54E-13	6.74E-10	2	1	1	1248	4
4.60E-08	3.21E-05	1	3	2	109	19
2.95E-12	6.34E-09	2	0	4	173	53
3.65E-06	0.0012218	0	2	0	51	22
3.07E-06	0.0010654	3	0	0	57	19
2.03E-07	0.000112	7	12	6	88	51
4.87E-06	0.0015423	0	0	0	23	16
3.08E-05	0.0062983	1	5	0	23	36
4.05E-05	0.0077574	16	21	14	97	52
5.20E-05	0.0093766	12	29	10	64	90
4.11E-06	0.0013447	1	0	2	43	23
1.25E-07	7.48E-05	4	1	1	61	33
1.29E-07	7.67E-05	4	2	2	70	30
3.79E-05	0.0073931	57	60	48	206	138
2.76E-05	0.0058176	13	19	12	70	64
5.14E-12	1.03E-08	102	187	77	766	1022
2.41E-06	0.0008808	64	54	30	169	247
3.18E-06	0.0010957	127	93	108	459	312
9.72E-09	8.47E-06	1	1	1	64	46
6.44E-06	0.0019214	170	164	99	481	405
5.46E-05	0.009745	83	84	42	202	225
1.39E-05	0.003462	117	63	27	406	205
2.73E-05	0.005749	119	227	111	430	507

1.74E-07	9.84E-05	46	76	39	236	236
5.56E-06	0.0017194	1	0	0	35	22
4.39E-05	0.0082966	0	0	0	22	9
1.28E-13	3.56E-10	0	0	0	230	67
1.18E-08	1.00E-05	0	0	2	99	41
3.43E-05	0.0068215	0	0	0	20	11
3.82E-05	0.0074291	14	48	18	87	154
8.08E-06	0.0022946	0	0	0	28	11
8.61E-11	1.27E-07	0	0	0	87	47
5.95E-08	3.95E-05	0	0	0	41	25
2.32E-05	0.0050776	0	0	0	22	11
1.29E-11	2.34E-08	0	0	0	125	48
6.87E-06	0.0020216	0	0	0	29	11
1.48E-11	2.62E-08	0	0	0	96	61
4.78E-05	0.0088237	1	0	0	29	14
1.42E-06	0.0005683	0	0	0	38	12
3.27E-06	0.0011173	0	0	0	20	20
4.66E-07	0.000229	0	0	0	28	23
1.83E-05	0.0042738	416	323	403	1646	810
1.03E-05	0.0027666	17	17	11	61	90
7.66E-07	0.0003442	1	0	0	35	37
1.70E-05	0.0040399	1	0	0	49	9
5.63E-06	0.0017348	0	0	0	39	7
5.90E-07	0.0002799	0	0	0	43	13
2.39E-07	0.0001304	4	7	9	68	59
1.08E-05	0.0028586	78	80	67	293	190
6.96E-07	0.0003199	15	19	5	63	123
2.47E-05	0.0053403	4	19	11	67	65
3.04E-05	0.0062375	27	46	23	104	136
1.24E-05	0.0031565	21	27	13	104	73
4.62E-05	0.0086202	20	23	18	91	69
2.45E-05	0.0052957	69	128	64	234	357
3.50E-05	0.0069262	85	109	44	236	267
4.23E-05	0.0080493	24	15	10	66	82
6.43E-06	0.0019205	18	46	14	92	175
2.57E-05	0.0054962	7	21	20	116	58
2.74E-06	0.0009696	36	18	54	113	409
8.03E-08	5.09E-05	2	7	0	73	40
1.37E-10	1.88E-07	0	3	1	92	58
1.25E-05	0.0031889	0	0	1	45	12
2.30E-05	0.0050455	114	140	80	303	372
4.27E-07	0.0002129	0	0	1	41	37
3.51E-06	0.0011841	0	0	0	28	14
3.86E-05	0.0074764	42	19	47	98	264
4.01E-07	0.0002023	7	8	1	61	52
3.39E-05	0.0067717	19	31	20	107	76
2.55E-06	0.0009189	2	10	5	40	67
1.29E-05	0.0032588	1	1	2	31	25
8.00E-06	0.0022804	3	3	2	49	22
1.03E-06	0.0004382	2	1	1	55	22
4.92E-18	3.27E-14	33	12	23	423	421
1.39E-06	0.0005604	2	1	1	45	26

9.48E-06	0.0025939	0	0	1	24	27
4.40E-06	0.0014168	171	322	174	703	769
8.78E-06	0.0024569	3	11	2	34	62
6.66E-06	0.0019661	2	1	0	25	34
4.50E-06	0.0014414	13	16	26	131	76
1.11E-08	9.53E-06	11	12	22	179	89
3.32E-06	0.0011323	16	18	4	65	95
2.15E-05	0.0048253	0	1	0	34	15
3.13E-07	0.0001643	0	0	1	58	28
3.02E-05	0.0062088	0	0	0	30	6
7.64E-07	0.0003439	0	0	0	43	12
1.76E-05	0.0041606	0	0	0	14	18
6.23E-07	0.0002932	4	4	10	83	44
5.03E-07	0.0002457	100	114	303	1443	879
1.41E-06	0.0005637	12	5	12	93	55
1.68E-05	0.0040035	10	11	5	94	28
1.67E-06	0.0006497	13	17	4	118	47
6.65E-06	0.0019661	58	48	29	180	154
5.20E-05	0.0093801	26	48	10	104	128
2.78E-05	0.0058522	124	163	72	320	430
3.27E-05	0.0065837	8	12	8	39	67
3.55E-06	0.0011951	180	224	102	504	664
3.71E-05	0.0072701	8	14	4	23	97
1.83E-06	0.0006968	80	35	20	125	492
1.74E-06	0.0006706	36	59	13	98	376
1.76E-05	0.0041522	23	34	5	61	182
2.65E-06	0.0009467	31	74	23	142	290
9.79E-06	0.0026493	12	12	4	43	78
8.84E-06	0.0024642	25	49	9	106	176
4.00E-12	8.27E-09	27	29	27	334	153
2.63E-07	0.0001429	29	59	30	319	117
1.04E-08	9.02E-06	28	14	35	117	462
2.05E-05	0.0046554	54	69	32	225	130
4.73E-05	0.0087272	83	99	79	327	187
1.31E-07	7.82E-05	12	25	11	72	173
2.84E-05	0.0059461	25	16	9	43	143
3.74E-05	0.0073086	41	18	7	58	198
3.53E-06	0.0011907	31	23	9	67	192
1.48E-05	0.0036158	62	43	62	257	160
3.44E-05	0.0068321	61	37	24	143	158
4.16E-05	0.0079349	4	1	0	22	32
2.81E-05	0.0059003	13	18	10	40	107
9.80E-07	0.0004215	0	0	0	30	18
2.12E-06	0.0007918	0	0	0	35	12
6.84E-06	0.0020144	0	0	0	24	14
6.82E-12	1.32E-08	24	37	23	292	161
2.38E-05	0.0051776	1	0	0	48	8
2.21E-06	0.000821	1	1	0	32	38
3.67E-10	4.55E-07	0	1	0	129	64
2.47E-06	0.0008946	1	0	1	46	26
4.92E-05	0.0090162	2	2	3	39	19
1.71E-06	0.0006606	1	1	1	43	26

3.05E-08	2.25E-05	0	0	0	44	27
4.31E-09	4.18E-06	0	0	0	30	57
3.85E-06	0.0012744	2	0	1	27	36
2.34E-09	2.43E-06	0	0	0	35	57
1.05E-10	1.50E-07	0	0	0	110	35
5.25E-07	0.0002544	2	0	0	32	54
3.80E-05	0.007395	1	0	0	9	34
4.49E-06	0.0014414	4	8	11	33	102
2.81E-05	0.0059003	0	0	0	21	11
2.52E-05	0.0054146	4	1	0	29	28
5.44E-05	0.0097121	1	4	1	29	24
4.91E-06	0.001554	52	43	32	189	131
4.10E-07	0.0002058	0	2	3	35	47
2.27E-05	0.0050037	0	0	0	14	17
1.21E-06	0.0004996	14	8	3	91	47
7.46E-06	0.002159	3	6	1	35	39
1.74E-05	0.0041231	2	2	0	31	24
1.54E-08	1.25E-05	35	33	63	225	463
1.24E-06	0.000511	95	149	175	592	569
3.22E-06	0.0011062	56	68	39	203	189
1.60E-05	0.0038576	106	165	61	297	489
4.46E-05	0.0084032	8	4	6	37	45
2.66E-05	0.0056382	41	34	43	186	108
2.97E-05	0.0061298	19	20	16	73	82
7.74E-06	0.0022244	33	28	22	119	105
1.38E-07	8.12E-05	8	12	12	79	82
1.94E-07	0.0001081	6	10	9	55	91
3.35E-05	0.0066894	11	21	20	108	57
2.30E-05	0.0050455	5	12	6	64	36
4.12E-05	0.0078781	11	21	2	32	122
3.91E-05	0.0075556	0	0	0	7	22
2.86E-05	0.0059697	0	0	0	9	21
4.70E-05	0.0087199	0	0	0	20	10
7.19E-08	4.65E-05	0	0	0	46	21
5.44E-08	3.67E-05	2	17	2	130	60
2.38E-09	2.45E-06	1	4	2	75	46
8.11E-07	0.0003588	0	3	0	62	23
2.87E-11	4.71E-08	6	41	8	320	208
4.98E-11	7.94E-08	3	16	6	181	81
2.98E-07	0.0001579	1	7	2	63	38
4.42E-05	0.0083462	39	67	22	115	212
1.80E-05	0.0042126	127	135	86	327	371
2.50E-06	0.0009034	8	42	17	173	100
2.43E-05	0.0052745	0	0	1	24	21
4.07E-09	3.99E-06	2	3	1	98	31
4.16E-08	2.95E-05	0	1	0	124	18
3.19E-08	2.34E-05	0	1	1	134	21
3.16E-06	0.0010927	0	1	1	66	15
7.38E-06	0.0021395	0	0	0	37	7
1.14E-07	6.88E-05	7	10	16	157	54
5.31E-05	0.009542	8	13	29	149	56
4.12E-06	0.0013464	0	0	0	27	14

8.30E-07	0.0003662	0	0	0	18	29
1.31E-06	0.0005312	0	0	0	24	21
1.12E-06	0.0004705	0	0	0	34	15
4.35E-09	4.20E-06	0	1	0	46	97
2.90E-18	2.02E-14	0	0	2	438	553
2.70E-08	2.01E-05	0	0	0	27	43
4.71E-05	0.0087199	0	0	0	8	20
4.42E-08	3.11E-05	0	0	0	27	39
1.92E-09	2.03E-06	0	0	0	40	53
7.42E-07	0.0003361	0	0	0	25	23
1.77E-05	0.0041678	0	0	0	10	22
2.40E-13	6.39E-10	0	1	0	143	304
1.11E-15	4.56E-12	0	0	0	154	260
7.39E-07	0.0003355	0	0	0	16	32
3.37E-06	0.0011457	0	0	0	81	219
9.31E-06	0.0025656	0	0	0	17	18
1.32E-07	7.86E-05	0	0	0	17	43
4.27E-05	0.0081127	291	273	185	740	569
1.04E-07	6.39E-05	4	4	1	25	89
2.27E-05	0.0050037	10	9	3	45	50
4.50E-08	3.14E-05	109	98	133	383	1177
5.34E-09	5.06E-06	40	88	49	542	210
2.51E-05	0.0054142	17	34	11	81	102
4.80E-05	0.0088497	11	9	2	42	51
1.49E-07	8.62E-05	13	9	4	81	65
1.32E-08	1.10E-05	4	2	1	87	32
1.54E-16	7.40E-13	4	1	3	167	116
1.05E-06	0.0004431	2	0	0	53	29
6.85E-15	2.49E-11	17	8	4	272	125
8.79E-06	0.0024585	1	1	0	22	37

Supplementary Table S4. Genomic coordinates of predicted miR6026 target s

Gene	chr	start	end	start2	end2
SIDCL2a	SL3.0ch06	32157049	32157032	32156092	32156089
SIDCL2b	SL3.0ch11	2713621	2713638	2715094	2715097
SIDCL2d	SL3.0ch11	2699787	2699804	2700167	2700170
SITM2	SL3.0ch09	13621046	13621025	-	-

sites in SIDCL2 and SITM2 mRNAs.

sequence (5' to 3')

GCAAUUCAACUCUAGCCAAUAA

GCAAUUCAGCACUAGUCAAGAA

GCAAUUCAACUCUAGUCAGUGA

GGAAAACAACUCUUGCCAAGAA

Supplementary Table S5. Percentage of different sizes of sRNA from potential target genes of miF

	<i>sIDCL2a</i>	<i>sIDCL2b</i>	<i>sIDCL2d</i>	<i>sITM2</i>
21nt	75%	56%	51%	80%
22nt	14%	33%	32%	9%
24nt	4%	2%	6%	1%

6026 in WT.

Supplementary Table S5. Target prediction of miR5302b-5p.

miRNA	Target_Ac	Expectatio	UPE\$	miRNA_st	miRNA_en	Target_sta	Target_en	miRNA_ali
miR5302b	Solyc08g00	1.5	-1	1	22	1148	1169	UGAAAUG
miR5302b	Solyc04g00	2	-1	1	22	44	65	UGAAAUG
miR5302b	Solyc02g00	2	-1	1	22	2968	2989	UGAAAUG
miR10533	Solyc06g00	0.5	-1	1	22	165	186	UCUUAUG/
miR10533	Solyc06g00	0.5	-1	1	22	1508	1529	UCUUAUG/
miR10533	Solyc06g00	0.5	-1	1	22	1738	1759	UCUUAUG/
miR10533	Solyc06g00	0.5	-1	1	22	1437	1458	UCUUAUG/
miR10533	Solyc00g10	0.5	-1	1	22	1270	1291	UCUUAUG/
miR10533	Solyc06g00	0.5	-1	1	22	1476	1497	UCUUAUG/
miR10533	Solyc06g00	0.5	-1	1	22	1711	1732	UCUUAUG/
miR10533	Solyc05g05	2	-1	1	22	1275	1296	UCUUAUG/
miR10533	Solyc05g04	2	-1	1	22	1314	1335	UCUUAUG/
miR10533	Solyc05g04	2	-1	1	22	1215	1236	UCUUAUG/
miR10533	Solyc05g05	2	-1	1	22	1571	1592	UCUUAUG/
miR10533	Solyc05g05	2	-1	1	22	1239	1260	UCUUAUG/
miR10533	Solyc05g05	2	-1	1	22	1604	1625	UCUUAUG/
miR10533	Solyc01g01	2	-1	1	22	151	172	UCUUAUG/

Target_aliğ Inhibition	Target_De	Multiplicity
UUAUUGC Cleavage	Ankyrin re	1
AAUUUCC Cleavage	Amino acic	1
CGCUACU, Cleavage	Woolly	1
ACAAGACC Cleavage	Mi1.7	1
ACAAGACC Cleavage	CNL4	1
ACAAGACC Cleavage	Mi1.6	1
GCAAGACC Cleavage	CNL6	1
GCAAGACC Cleavage	NBS-LRR re:	1
GCAAGACC Cleavage	Mi1.5	1
GCAAGACC Cleavage	Mi-1.1	1
AGAAGACC Cleavage	LOW QUAL	1
AGAAGACC Cleavage	NBS-LRR re:	1
AGAAGGUC Cleavage	NBS-LRR re:	1
AGAAGACC Cleavage	NBS-LRR re:	1
ACAAGACC Cleavage	LOW QUAL	1
ACAAGACC Cleavage	NBS-LRR re:	1
UGUAUACC Cleavage	LOW QUAL	1

Supplementary Table S6. Primers used in this study.

Primer	Sequence (5' to 3')	Experiment
DCL2ab_sg1	TGTGGTC TCAATTG GGATGTG CTCGTAA AATACCG TTTTAGA GCTAGAA ATAGCAA G	CRISPR-Cas9 construct
DCL2ab_sg2	TGTGGTC TCAATTG GTGACCA GAAAGGT TATATAG TTTTAGA GCTAGAA ATAGCAA G	CRISPR-Cas9 construct
DCL2a_G T_F1	TACGAAA ATCATCA TGAGGGT CT	genotyping of CRISPR mutant
DCL2a_G T_R1	AGAGACA TGGAGTT GATTACA CA	genotyping of CRISPR mutant
DCL2a_G T_F2	GGAACCG TTGGTTA CTCCTC	genotyping of CRISPR mutant
DCL2a_G T_R2	GGAAGG CACATCC AAACAGT	genotyping of CRISPR mutant
DCL2b_G T_F1	TACGAAA ATCATCA TGAGGGT CT	genotyping of CRISPR mutant
DCL2b_G T_R1	ACGAGCA AATATCC CCTGGT	genotyping of CRISPR mutant

DCL2b_G T_F2	CGATCTT TGTTGAT TCTGGCT TTG	genotypin g of CRISPR mutant
DCL2b_G T_R2	TCCCGAG CATGTAC TCTTGTG GAC	genotypin g of CRISPR mutant
miR6026_ probe	GCAATAC AACTCTA GCCAAGA A	Northern blot
miR482e_ probe	GGTATGG GAGGAG TAGGAAA GA	Northern blot
U6_probe	GGCCATG CTAATCT TCTCTGT ATCGTT	Northern blot
DCL2a_RT _F	CGATCTT TGTTGAT TCTGGCT TTG	quantitati ve PCR
DCL2a_RT _R	GGAAGG CACATCC AAACAGT	quantitati ve PCR
DCL2b_RT _F	CGATCTT TGTTGAT TCTGGCT TTG	quantitati ve PCR
DCL2b_RT _R	TCCCGAG CATGTAC TCTTGTG GAC	quantitati ve PCR
DCL2c_RT _F	GGTATAT TTTGTGC AATATTT GG	quantitati ve PCR
DCL2c_RT _R	TCAACTA GAGGTG AACATGG TTC	quantitati ve PCR
DCL2d_RT _F	CTGTGAA GAAAATG ATTCCTT TC	quantitati ve PCR

DCL2d_RT_R	TCCACAT TTGCCTG AATATCC TTT	quantitativa ve PCR
TM2_RT_F	CGGTCTG GGGAAA ACAACTC	quantitativa ve PCR
TM2_RT_R	AAGATTT CACCCGC TCTTGG	quantitativa ve PCR
DCL1_RT_F	TCGAAGG ACCCATT CTTAAC G	quantitativa ve PCR
DCL1_RT_R	CTATTGG CCCTCTG AAGACAA G	quantitativa ve PCR
DCL3_RT_F	TTGCCAC TGATGTG GTTGAG	quantitativa ve PCR
DCL3_RT_R	TCCCTCT GCTTCTT GTTTCC	quantitativa ve PCR
DCL4_RT_F	ATGGGGC ACTTAAT AAAGAAA CC	quantitativa ve PCR
DCL4_RT_R	TATAGAA GATTGAG GAGCACT ATC	quantitativa ve PCR
TMV_F	TCCGTGT TCTTTTCA TCAGC	quantitativa ve PCR
TMV_R	CCAAACC AAACCAG AAGAGC	quantitativa ve PCR
PVX_F	AACTGGC AAGCACA AGGTTTC A	quantitativa ve PCR
PVX_R	CAGTTTG GGCAGCA TTCATTTTC	quantitativa ve PCR

Actin_F	TGAGGAT ATTCAGC CCCTTG	quantitati ve PCR
Actin_R	CCATAAC ACCTGTG TGCCTG	quantitati ve PCR
mimic_RT _F	AACTCGG ATAGCCA AGAAGTT	Semi- quantitati ve PCR
mimic_RT _R	GCTATTC GAGTTGT ATTGCAT T	Semi- quantitati ve PCR
mimic_GT	CCAACCA	Genotypi
mimic_GT	TTAGACC	Genotypi
DCL2a_R ACE_oute r	TGAGTCA CTAGAAC AACAGTC GG	5'-RLM- RACE
DCL2a_R ACE_inne r	CTATGTA CGGAGAT GGCTTTC GA	5'-RLM- RACE
DCL2b_R ACE_oute r	TCTCCTT GCTGAGT CACCAGA AC	5'-RLM- RACE
DCL2b_R ACE_inne r	AGACGGC TTCCGAA GAAGGTA AG	5'-RLM- RACE
DCL2d_R ACE_oute r	ACAGCTA TGTAAGG CGACGGT TTAC	5'-RLM- RACE
DCL2d_R ACE_inne r	AATCTCA AGGGCTT CCAAGT AT	5'-RLM- RACE
SBP2_RA CE_outer	TGAAAGC TACCACC ACTGTGA CC	5'-RLM- RACE

SBP2_RA CE_innne r	ACCACTG TGACCAT TCGCAAC C	5'-RLM- RACE
D2-1_F	AGGAGG TGGAGA GGTTTT A	quantitati ve PCR
D2-1_R	TTGCAGA GCCATCG AGTTTG	quantitati ve PCR
D2-2_F	ACGGCG GGTATGA GGATG	quantitati ve PCR
D2-2_R	AGAAAGC ATCATTG GCCGAC	quantitati ve PCR
D2-3_F	GCTTGCA CGACTCC AATCTT	quantitati ve PCR
D2-3_R	ACTCCTC CGGCGTC ATTTTA	quantitati ve PCR
D2-4_F	AGGAATG GGTAGCA GTGATGT	quantitati ve PCR
D2-4_R	TGGGTCC ACTTTAT CGTCACT	quantitati ve PCR
D2i-1_F	TGTTTT CTGCACG TCCTTG	quantitati ve PCR
D2i-1_R	CTCCACT TCTCCAC TTCTCCA	quantitati ve PCR
D2i-2_F	GATCGCA CCATTCA GAGCAG	quantitati ve PCR
D2i-2_R	GGTTCTC CGATGAC AGTCCA	quantitati ve PCR

premiR60 26_F	GGTTTGG AAGACGA GGCAAA	quantitati ve PCR
premiR60 26_R	CACGGTG TTGCTTT CCATGA	quantitati ve PCR

Supplementary Table S7. Tomato miRNA list used in this study.

miRNA	sequence	miRNA_size
miR156a	TTGACAGAAGATAGAGAGCAC	21nt
miR156b	TTGACAGAAGATAGAGAGCAC	21nt
miR156c	TTGACAGAAGATAGAGAGCAC	21nt
miR156d-3p	GCTCACTGCTCTATCTGTCACC	22nt
miR156d-5p	TGACAGAAGAGAGTGAGCAC	others
miR156e-3p	GCTTACTCTCTATCTGTCACC	21nt
miR156e-5p	TGATAGAAGAGAGTGAGCAC	others
miR159	TTTGGATTGAAGGGAGCTCTA	21nt
miR160a	TGCCTGGCTCCCTGTATGCCA	21nt
miR162	TCGATAAACCTCTGCATCCAG	21nt
miR164a-3p	CATGTGCCTGTTTTCCCCATC	21nt
miR164a-5p	TGGAGAAGCAGGGCACGTGCA	21nt
miR164b-3p	CACGTGTTCTCCTTCTCCAAC	21nt
miR164b-5p	TGGAGAAGCAGGGCACGTGCA	21nt
miR166a	TCGGACCAGGCTTCATTCCCC	21nt
miR166b	TCGGACCAGGCTTCATTCCCC	21nt
miR166c-3p	TCGGACCAGGCTTCATTCCCTC	21nt
miR166c-5p	GGGATGTTGTCTGGCTCGACA	21nt
miR167a	TGAAGCTGCCAGCATGATCTA	21nt
miR167b-3p	AGGTCATCTAGCAGCTTCAAT	21nt
miR167b-5p	TAAAGCTGCCAGCATGATCTGG	22nt
miR168a-3p	CCTGCCTTGCATCAACTGAAT	21nt
miR168a-5p	TCGCTTGGTGCAGGTCGGGAC	21nt
miR168b-3p	CCCGCCTTGCATCAACTGAAT	21nt
miR168b-5p	TCGCTTGGTGCAGGTCGGGAC	21nt
miR169a	CAGCCAAGGATGACTTGCCGG	21nt
miR169b	TAGCCAAGGATGACTTGCCCTG	21nt
miR169c	CAGCCAAGGATGACTTGCCGA	21nt
miR169d	TAGCCAAGGATGACTTGCCCTA	21nt
miR169e-3p	TGGCAAGCATCTTTGGCGACT	21nt
miR169e-5p	TAGCCAAGGATGACTTGCCCTTT	22nt
miR171a	TGATTGAGCCGTGCCAATATC	21nt
miR171b	TTGAGCCGTGCCAATATCACG	21nt
miR171c	TATTGGTGCGGTTCAATGAGA	21nt
miR171d	TTGAGCCGCGCCAATATCAC	others
miR171e	TTGAGCCGCGTCAATATCTCT	21nt
miR172a	AGAATCTTGATGATGCTGCAT	21nt
miR172b	AGAATCTTGATGATGCTGCAT	21nt
miR1911	ACGAGAGTCATCTGTGACAGG	21nt
miR1916	ATTTCACTTAGACACCTCAA	others
miR1917	ATTAATAAAGAGTGCTAAAGT	21nt
miR1918	TGTTGGTGAGAGTTCGATTCTC	22nt
miR1919a	ACGAGAGTCATCTGTGACAGG	21nt
miR1919b	ACGAGAGTCATCTGTGACAGG	21nt
miR1919c-3p	ACGAGAGTCATCTGTGACAGG	21nt
miR1919c-5p	TGTCGCAGATGACTTTCGCCC	21nt
miR319a	CTTGGACTGAAGGGAGCTCC	others
miR319b	TTGGACTGAAGGGAGCTCCCT	21nt
miR319c-3p	TTGGACTGAAGGGAGCTCCTT	21nt
miR319c-5p	AGAGCTTCCTTCAGCCCACTC	21nt

miR390a-3p	CGCTATCCATCCTGAGTTTTA	21nt
miR390a-5p	AAGCTCAGGAGGGATAGCACC	21nt
miR390b-3p	CGCTATCCATCCTGAGTTTCA	21nt
miR390b-5p	AAGCTCAGGAGGGATAGCGCC	21nt
miR394-3p	AGGTGGGCATACTGTCAACA	others
miR394-5p	TTGGCATTCTGTCCACCTCC	others
miR395a	CTGAAGTGTGGGGGAACTC	21nt
miR395b	CTGAAGTGTGGGGGAACTC	21nt
miR396a-3p	GTTCAATAAAGCTGTGGGAAG	21nt
miR396a-5p	TTCCACAGCTTTCTTGAAGT	21nt
miR396b	TTCCACAGCTTTCTTGAAGT	21nt
miR397	ATTGAGTGCAGCGTTGATGA	others
miR398b	TGTGTTCTCAGGTCACCCCTT	21nt
miR399	TGCCAAAGGAGAGTTGCCCTA	21nt
miR403-3p	CTAGATTCACGCACAAGCTCG	21nt
miR403-5p	CGTTTGTGCGTGAATCTAACA	21nt
miR408	ACGGGGACGAGCCAGAGCATG	21nt
miR4376	ACGCAGGAGAGATGATGCTGGA	22nt
miR4414b	TGTGAATGATGCGGGAGATAA	21nt
miR447	ATGTAGAAATTGATAGGTATT	21nt
miR477-3p	AGTTCTTGTAGGGTGAGACAAC	22nt
miR477-5p	TGTCTCTCCCTCAAGGGCTCC	21nt
miR482a	TTCCAATTCCACCCATTCTTA	22nt
miR482b	TCTTGCCTACACCGCCCATGCC	22nt
miR482c	TCTTGCCAATACCGCCATTCC	22nt
miR482d-3p	TTTCTATTCCACCCATGCCAA	22nt
miR482d-5p	GGAGTGGGTGGGATGGAAAAA	21nt
miR482e-3p	TCTTCTACTCCTCCCATAACC	22nt
miR482e-5p	TGTGGGTGGGGTGGAAAGATT	21nt
miR530	TGCATTTGCACCTGCACCTTA	21nt
miR5300	TCCCCAGTCCAGGCATTCCAAC	22nt
miR5301	TCTTCTACTCCTCCCATAACC	22nt
miR5302a	AAACGAGGTTTGTTACTTTGG	21nt
miR5302b-3p	TTTTCAACTATAGCATTATTT	21nt
miR5302b-5p	TGAAATGCTATAGTTGGAAAGT	22nt
miR5303	TTTTTGAAGAGTTTCGAGCAAC	21nt
miR5304	TCAATGCTACATACTCATCCC	21nt
miR6022	TGGAAGGGAGAATATCCAGGA	21nt
miR6023	TTCCATGAAAGAGTTTTTGGAT	22nt
miR6024	TTTAGCAAGAGTTGTTTTACC	21nt
miR6025	TTATTGAACCTTGATGTTATC	21nt
miR6026	TTCTTGGCTAGAGTTGTATTGC	22nt
miR6027-3p	TGAATCCTTCGGCTATCCATA	21nt
miR6027-5p	ATGGGTAGCACAAGGATTAATG	22nt
miR827	TTAGATGAACATCAACAAACA	21nt
miR828	TCTTGCTCAAATGAGTATTCCA	22nt
miR845	TGCTCTGATACCAATTGAAGAA	22nt
miR858	CTCATTGTCTGTTTCGACCTTG	21nt
miR9469-3p	ATTCGGTCTTCTTATGTGGAC	21nt
miR9469-5p	CCACATAAGAAGACCGAATTC	21nt
miR9470-3p	TTGGCTCATGGATTTTAGC	others
miR9470-5p	TGAAATCCATGAGCCTAAACT	21nt

miR9471a-3p	TTGGCTGAGTGAGCATCACGG	21nt
miR9471a-5p	CAGGTGCTCACTCAGCTAATA	21nt
miR9471b-3p	TTGGCTGAGTGAGCATCACTG	21nt
miR9471b-5p	GAGGTGCTCACTCAGCTAATA	21nt
miR9472-3p	TTCACAATCTCTGCTGAAAAA	21nt
miR9472-5p	TTTCAGTAGACGTTGTGAATA	21nt
miR9473-3p	AAACGAGTTCAGATTTACAGC	21nt
miR9473-5p	TGGCTGTAAATCTAAACTCGT	21nt
miR9474-3p	TTTTGTTCGCAGATACTACAGT	22nt
miR9474-5p	TGTAGAAGTCATGAATAAAATG	22nt
miR9475-3p	CTACAATGTAGAGATCGTTTT	21nt
miR9475-5p	AACGATCTCTACATTGTAGGC	21nt
miR9476-3p	AAAAAGATGCAGGACTAGACC	21nt
miR9476-5p	TCTAGTCCTGCATCTTTTTTT	21nt
miR9477-3p	TTGGGAAAGGGAACAACTGATAGT	others
miR9477-5p	TATCCGTTGTTCCCTTTTCCTACC	others
miR9478-3p	TTCGATGACATATTTGAGCCT	21nt
miR9478-5p	GCTTAAATATGTAGATCGAACT	22nt
miR9479-3p	AGAATGGTAGAGGGTCGGACC	21nt
miR9479-5p	TCCAGTCCTCTACCCTTCTCC	21nt