

University of Groningen

## Iron starvation triggers the stringent response and induces amino acid biosynthesis for bacillibactin production in *Bacillus subtilis*

Miethke, Marcus; Westers, Helga; Blom, Evert-Jan; Kuipers, Oscar; Marahiel, Mohamed A.

*Published in:*  
Journal of Bacteriology

*DOI:*  
[10.1128/JB.01049-06](https://doi.org/10.1128/JB.01049-06)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2006

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Miethke, M., Westers, H., Blom, E-J., Kuipers, O. P., & Marahiel, M. A. (2006). Iron starvation triggers the stringent response and induces amino acid biosynthesis for bacillibactin production in *Bacillus subtilis*. *Journal of Bacteriology*, 188(24), 8655-8657. DOI: 10.1128/JB.01049-06

**Copyright**

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

**Take-down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

TABLE S1. Mean induction ratios and Bayesian standards deviations of *Bacillus subtilis* ATCC 21332 genes during iron starvation in minimal medium (the values were obtained from six microarray experiments yielding twelve normalized signal intensities for each gene)

gene	ratio	Bayes.p			
			ykoM	1.98	1.47E-07
			levD	1.96	1.27E-04
sacA	7.09	4.13E-09	yncC	1.95	1.98E-06
ald	6.91	1.13E-13	lysC	1.94	2.40E-05
yurO	5.27	7.33E-15	ywtA	1.93	2.04E-04
ykuN	4.92	1.15E-14	ycgT	1.91	1.03E-11
ykuO	4.71	1.20E-12	ywfB	1.90	3.78E-04
ydbN	4.08	5.93E-13	xylB	1.88	1.61E-05
ysbA	3.65	3.79E-04	lpdV	1.87	3.43E-09
dhbB	3.56	8.71E-10	bkdR	1.84	4.94E-08
dhbF	3.52	1.63E-12	pksC	1.84	7.25E-09
yerA	3.49	5.50E-09	bkdAB	1.83	6.82E-12
dhbE	3.46	9.97E-10	pksG	1.82	4.02E-09
ywdA	3.25	2.33E-05	yfiD	1.82	5.06E-07
ywcJ	3.18	2.36E-04	yitM	1.81	1.46E-07
yurJ	3.17	3.81E-10	yhzC	1.81	8.53E-08
yurM	2.94	1.61E-08	pksD	1.81	6.68E-09
yurP	2.93	6.81E-12	yuiE	1.81	1.63E-04
vpr	2.81	5.32E-05	yfiE	1.79	4.12E-07
xylA	2.70	1.55E-07	spoIIAB	1.79	2.18E-07
dhbA	2.62	1.30E-10	phrA	1.79	2.71E-10
ywbG	2.56	1.91E-07	yitJ	1.78	4.77E-08
ctaF	2.50	3.48E-10	yurL	1.78	7.66E-10
ywbH	2.46	2.63E-09	hom	1.77	4.57E-06
ribR	2.44	2.16E-04	yrcP	1.76	2.79E-05
rbsB	2.41	1.50E-05	yoaD	1.76	1.10E-10
rbsD	2.40	2.30E-05	dhbC	1.76	1.87E-04
yuiA	2.38	7.57E-13	ylbA	1.74	4.15E-06
yurN	2.32	2.22E-08	yxEB	1.73	9.21E-07
xynP	2.31	7.84E-07	feuC	1.73	7.56E-07
yclM	2.28	3.77E-06	kdgT	1.73	5.14E-04
rapH	2.27	3.87E-10	bkdAA	1.71	3.17E-09
ctaE	2.21	1.25E-10	ywbI	1.69	1.62E-08
katA	2.20	6.96E-08	yvgM	1.68	4.54E-09
ptb	2.18	3.03E-10	ask	1.67	3.38E-05
ykuP	2.14	3.59E-08	yuiG	1.66	1.98E-08
sacP	2.14	6.91E-06	ywbL	1.66	3.30E-07
ybbD	2.13	5.51E-08	rbsC	1.66	6.82E-04
yisS	2.13	2.15E-07	ykwB	1.66	5.62E-09
dhaS	2.12	3.40E-10	yoxA	1.63	3.24E-08
yuiI	2.11	2.36E-10	yvfH	1.63	1.43E-07
rbsR	2.08	6.03E-05	yncM	1.62	2.19E-09
feuB	2.07	5.97E-08	fhuG	1.60	6.04E-07
yoaJ	2.07	1.78E-09	feuA	1.60	3.17E-06
acpK	2.05	1.45E-10	yugN	1.60	3.61E-07
bkdB	2.00	1.25E-11	yojC	1.59	1.93E-06
ybbB	1.99	6.22E-08	pksE	1.59	3.19E-08
yqgY	1.98	3.53E-10	buk	1.58	4.22E-08
yugM	1.98	3.02E-09	yoaC	1.58	1.54E-07

ykzF	1.57	1.21E-07	pdhB	1.38	1.41E-09
yhfQ	1.56	6.21E-06	yisV	1.38	8.03E-04
amhX	1.56	2.90E-09	phrG	1.38	3.95E-04
ywtD	1.55	1.18E-07	yfkN	1.38	6.24E-05
ycgA	1.55	5.46E-08	ywbN	1.37	6.91E-06
yutH	1.55	1.94E-05	yydK	1.37	1.71E-04
yitI	1.55	2.70E-09	odhA	1.37	5.32E-06
yvdA	1.53	1.20E-04	yetG	1.37	1.38E-05
tatCY	1.53	1.31E-07	ykyB	1.36	3.73E-04
tatAY	1.53	3.69E-08	ccdA	1.36	9.02E-04
yjcI	1.52	1.41E-09	ykoQ	1.36	4.15E-04
thrB	1.52	2.75E-05	yhxA	1.36	5.09E-05
yjnA	1.52	1.76E-04	flgC	1.36	3.39E-06
yoaB	1.51	4.94E-07	yezB	1.36	3.12E-05
spoVG	1.50	1.43E-06	thiM	1.36	6.38E-05
cysE	1.50	2.57E-08	xylR	1.36	4.90E-05
cysS	1.49	5.40E-06	yvyD	1.36	1.09E-08
yweA	1.49	7.92E-05	qcrB	1.35	1.92E-05
ytzE	1.49	1.89E-06	yheJ	1.35	2.76E-04
fhuD	1.48	1.63E-05	fhuC	1.35	2.04E-07
yfhC	1.48	2.33E-05	yhdG	1.34	2.17E-05
ybbA	1.48	2.12E-07	cgeE	1.34	8.30E-04
ywbM	1.48	2.54E-07	yhjC	1.34	1.27E-06
rapA	1.47	2.26E-08	rapE	1.34	6.44E-04
yetH	1.47	7.74E-07	ybdN	1.34	4.68E-04
ureA	1.47	4.98E-05	ureC	1.34	3.63E-04
yyaJ	1.46	1.38E-05	flgB	1.33	1.87E-05
dppB	1.46	4.05E-04	fliE	1.33	1.61E-05
yxjG	1.46	1.25E-04	yjcL	1.33	7.80E-05
pksL	1.46	4.79E-07	yojN	1.33	4.18E-06
yphE	1.46	6.84E-08	ybgE	1.33	6.34E-05
fhuB	1.46	8.32E-07	nadC	1.32	2.74E-06
thrC	1.46	1.96E-05	ybbK	1.32	9.32E-04
gabP	1.45	4.44E-06	sigH	1.32	1.05E-04
gspA	1.44	5.59E-07	yutF	1.31	9.61E-04
yopT	1.44	6.36E-05	bglH	1.31	5.59E-04
yfmI	1.44	5.85E-05	gutR	1.31	2.08E-04
ywqI	1.43	1.35E-04	yrkL	1.30	6.82E-06
ylmB	1.43	1.30E-07	yfhB	1.30	3.36E-06
bglP	1.43	7.04E-04	pdhD	1.30	2.91E-07
yqcG	1.43	5.03E-07	ygaB	1.30	1.56E-04
odhB	1.43	7.72E-08	yaaQ	1.30	2.83E-04
yoaG	1.43	6.36E-05	ctaD	1.30	8.52E-06
yjcJ	1.42	1.12E-05	ytkA	1.30	3.61E-04
ypiB	1.42	1.08E-07	thiC	1.30	1.25E-07
yfmJ	1.42	2.79E-05	ydbM	1.29	2.44E-04
bcd	1.41	3.96E-06	hutP	1.29	9.55E-04
ynfC	1.41	1.35E-04	yfmH	1.29	8.72E-04
ycsF	1.40	6.16E-04	yvgR	1.29	2.39E-05
yhfE	1.40	3.22E-07	yqiQ	1.29	1.69E-04
yhaA	1.40	1.20E-07	pksJ	1.29	2.23E-04
yocS	1.40	4.64E-08	yaaR	1.29	1.06E-04
yoeB	1.40	8.39E-05	yufO	1.28	6.29E-05
aadK	1.39	1.90E-04	ndk	1.28	1.72E-04
ywjB	1.39	1.20E-05	mtlD	1.28	6.35E-04
mpr	1.39	2.52E-05	kdgK	1.28	3.98E-04
kbaA	1.39	2.05E-04	yazC	1.28	1.57E-04

yceE	1.28	5.50E-05	ykrY	1.19	7.15E-05
fur	1.28	1.93E-04	ykrU	1.19	8.87E-04
ydiH	1.27	3.67E-05	epr	1.18	7.06E-04
ywfH	1.27	5.76E-04	yciA	1.18	4.77E-04
ykuL	1.27	3.68E-04	ygaJ	1.18	3.98E-04
yojM	1.27	3.49E-04	leuB	1.17	1.54E-05
yitQ	1.27	6.03E-05	bioW	1.16	3.99E-04
pksH	1.27	1.62E-05	leuC	1.16	2.37E-04
spoIISA	1.27	1.59E-04	ftsA	1.15	4.61E-04
yjcG	1.27	4.87E-04	ykrT	1.15	7.73E-05
yuxI	1.26	2.88E-05	ykuQ	1.15	6.68E-04
yxjJ	1.26	9.47E-04	ydjG	1.15	2.27E-04
pdhC	1.26	4.95E-08	ilvC	1.15	8.58E-04
ykvA	1.26	1.35E-04	rrn	1.14	4.78E-04
nadB	1.26	7.57E-05	rrn	1.14	3.55E-04
spoIISB	1.26	6.58E-04	leuA	1.14	2.64E-05
ygaN	1.25	2.61E-04	tenA	1.14	1.79E-04
yusV	1.25	2.98E-04	ykoF	1.13	2.40E-04
ilvA	1.25	3.39E-04	ilvB	1.13	2.54E-04
yhjB	1.25	1.41E-04	yetF	1.13	9.71E-04
yfmB	1.25	3.39E-05	tenI	1.12	3.53E-04
flgM	1.25	1.70E-04	thiS	1.12	2.72E-04
yqzF	1.24	1.02E-04	nadA	1.11	4.93E-04
aroA	1.24	4.27E-06	rpmD	0.90	4.98E-04
yubA	1.24	8.56E-04	tufA	0.89	2.98E-04
dat	1.24	1.15E-04	rpsJ	0.89	4.45E-04
yukD	1.24	3.99E-04	map	0.88	3.53E-05
yceD	1.24	1.40E-05	ysxB	0.88	5.47E-04
spo0A	1.24	7.04E-04	rplB	0.88	6.05E-05
punA	1.24	2.19E-05	rpsG	0.88	2.50E-05
yopD	1.23	4.21E-04	rplC	0.88	4.61E-05
mcsB	1.23	6.58E-04	rrn	0.88	3.15E-04
yceC	1.23	2.05E-05	rpsN	0.88	1.48E-04
pdhA	1.23	6.50E-08	yhfU	0.87	6.86E-04
groES	1.23	1.34E-06	rplW	0.86	1.12E-04
ydjE	1.23	4.08E-04	mcpC	0.86	9.05E-04
ydaG	1.23	4.01E-04	yusC	0.86	8.67E-04
ysmA	1.23	4.28E-04	rplV	0.85	7.25E-06
yvyG	1.23	1.02E-04	rpmJ	0.85	3.01E-05
qcrC	1.22	1.03E-04	secY	0.85	1.30E-04
yfiY	1.22	2.75E-05	opuCD	0.85	6.76E-04
yueJ	1.22	2.33E-04	yqeV	0.85	3.72E-04
ykrW	1.22	1.27E-04	rplA	0.85	1.01E-05
levF	1.22	8.47E-04	cspD	0.84	6.90E-04
ykrS	1.22	8.16E-06	dinG	0.84	7.13E-04
patA	1.21	3.57E-04	rpsE	0.84	9.50E-05
ypjP	1.21	5.84E-04	yvfw	0.84	1.82E-04
hpr	1.21	4.81E-05	rplD	0.84	8.98E-07
yhcr	1.21	7.75E-04	yrpE	0.84	5.25E-04
yvaB	1.21	1.56E-04	pheS	0.84	1.83E-04
era	1.20	8.97E-04	ppiB	0.83	4.04E-04
yybS	1.20	4.60E-04	rrn	0.83	8.49E-05
ykrX	1.20	1.24E-05	xpt	0.83	4.54E-04
ahpF	1.20	1.76E-04	opuAB	0.83	5.14E-04
yqjI	1.20	7.44E-04	yhfT	0.83	2.72E-04
yjcF	1.19	3.32E-04	rpoC	0.83	2.10E-04
recO	1.19	6.70E-04	yvbY	0.83	5.00E-04

ykqC	0.83	1.45E-04	veg	0.77	5.09E-04
rpsS	0.83	3.47E-07	gyrA	0.77	2.43E-05
minD	0.82	2.11E-04	guaB	0.77	6.10E-06
fabL	0.82	6.08E-05	dltA	0.76	6.19E-04
pyrB	0.82	5.32E-04	queA	0.76	4.03E-06
sspE	0.82	6.56E-05	rpe	0.76	5.36E-05
yusA	0.82	1.50E-04	dnaN	0.76	3.71E-06
pheT	0.82	3.45E-04	ytxC	0.76	1.87E-04
yqxC	0.82	5.85E-05	pnpA	0.76	7.45E-06
alsT	0.82	1.08E-04	serS	0.76	2.45E-05
trxB	0.82	6.27E-04	yhcL	0.76	3.12E-04
ycdI	0.82	8.49E-04	thiL	0.76	1.09E-06
pssA	0.81	1.67E-04	purK	0.76	7.11E-04
rpsK	0.81	1.56E-05	proS	0.75	6.98E-05
pyk	0.81	6.41E-04	qoxB	0.75	2.20E-05
hit	0.81	4.10E-04	ytgP	0.75	2.79E-06
acpA	0.81	2.68E-05	ylxY	0.75	9.68E-05
birA	0.81	5.17E-04	ybdB	0.75	2.52E-05
dnaC	0.81	2.31E-04	ykkE	0.75	4.13E-04
tgt	0.81	1.16E-04	hbs	0.75	7.46E-04
lysS	0.81	2.03E-04	dacA	0.75	1.10E-05
mreC	0.81	7.04E-04	rpsB	0.74	1.73E-07
purA	0.81	7.81E-04	yloA	0.74	3.10E-04
glnA	0.81	2.26E-04	ybcI	0.74	2.71E-05
speE	0.80	2.17E-04	metK	0.74	2.50E-07
rplJ	0.80	4.52E-08	yqeJ	0.74	9.85E-06
atpC	0.80	9.45E-04	nrde	0.74	5.43E-04
rplU	0.80	4.72E-06	xkdJ	0.74	3.67E-04
ymaA	0.80	7.54E-04	rpsF	0.74	2.10E-06
moaD	0.80	8.95E-04	ybfM	0.74	5.81E-05
yclP	0.80	3.64E-05	ylbQ	0.74	1.59E-04
ypsC	0.79	2.07E-04	yjqA	0.74	3.29E-05
rrn	0.79	9.09E-05	ycgO	0.74	5.12E-05
ylxL	0.79	6.87E-04	tagH	0.74	4.99E-06
mraY	0.79	6.77E-05	ffh	0.73	2.55E-06
yacF	0.79	8.12E-06	ygaD	0.73	1.80E-04
yusI	0.79	4.10E-05	mreD	0.73	9.29E-06
yxjM	0.79	6.55E-04	tyrA	0.73	5.51E-05
murG	0.79	6.63E-05	opuBB	0.73	1.99E-04
yqfS	0.79	4.06E-06	trmD	0.73	1.20E-05
lipB	0.79	2.66E-04	rpmI	0.73	2.08E-06
oppC	0.79	6.04E-04	lip	0.73	1.06E-04
dltE	0.78	8.66E-05	ybcD	0.73	7.85E-05
yqiZ	0.78	4.50E-04	pit	0.73	1.86E-06
nusA	0.78	1.33E-04	dnaK	0.72	9.68E-07
yqeI	0.78	1.06E-06	cdsA	0.72	4.13E-06
gatA	0.78	2.47E-04	opuCB	0.72	7.71E-05
opuAC	0.78	7.40E-05	opuBD	0.72	2.89E-04
nusG	0.78	2.83E-06	grpE	0.72	4.43E-07
yhfR	0.78	2.57E-06	murAA	0.72	2.19E-05
ykvK	0.77	5.21E-04	yrrN	0.72	8.25E-07
yorE	0.77	9.76E-04	ctc	0.71	6.23E-05
murC	0.77	7.30E-07	nagP	0.71	2.69E-05
rplQ	0.77	1.49E-05	tsf	0.71	4.38E-06
dnaJ	0.77	6.42E-04	pyrE	0.71	7.74E-06
ylxR	0.77	3.25E-05	yckK	0.71	3.55E-04
hisS	0.77	2.50E-05	ylxS	0.71	4.19E-06

xhlB	0.71	5.28E-04	speB	0.64	1.03E-07
apt	0.71	1.80E-05	dltD	0.64	4.87E-06
xkdK	0.71	6.10E-05	yqgZ	0.64	1.17E-08
yqiC	0.70	1.21E-05	trpE	0.64	6.39E-07
asnB	0.70	1.41E-08	yqiX	0.64	1.02E-05
purM	0.70	2.09E-04	yceA	0.64	1.04E-08
ftsY	0.70	8.49E-05	yugI	0.64	1.75E-06
rpmH	0.70	2.20E-05	dltB	0.63	1.19E-06
ybcM	0.70	5.82E-04	udk	0.63	9.87E-08
rpmGA	0.70	1.81E-04	dltC	0.63	4.59E-07
purS	0.70	2.22E-04	qoxD	0.63	4.11E-04
yneF	0.69	6.65E-04	hemY	0.63	6.47E-05
ptsI	0.69	5.06E-06	trpD	0.63	1.12E-07
yqeM	0.69	7.69E-07	yomY	0.62	2.81E-05
infB	0.69	7.62E-07	cspB	0.62	2.75E-07
pyrH	0.69	3.85E-08	purH	0.62	2.20E-05
ybaK	0.69	2.29E-06	rpsI	0.62	8.83E-04
rnmV	0.69	2.95E-05	ylxM	0.62	4.25E-08
hisC	0.69	5.45E-05	ylaG	0.62	2.21E-07
prs	0.69	7.10E-05	yjcD	0.62	8.88E-05
ykaA	0.69	7.97E-08	yhzB	0.62	2.79E-09
trpA	0.69	2.21E-05	yvdJ	0.62	1.73E-05
glmS	0.69	5.53E-07	yrrM	0.61	1.10E-05
yrvE	0.68	5.41E-06	ybxB	0.61	1.29E-09
argC	0.68	5.98E-04	rpmB	0.61	7.69E-05
ylxP	0.68	1.28E-07	ackA	0.61	8.25E-08
argJ	0.68	5.19E-04	ydcL	0.61	2.32E-09
murD	0.68	6.96E-08	citB	0.61	9.86E-08
rpsO	0.68	3.79E-06	purD	0.61	1.15E-05
ymcB	0.68	9.07E-06	rpsR	0.61	8.49E-05
trmU	0.67	4.23E-08	frr	0.60	1.80E-10
rimM	0.67	3.70E-07	pyrD	0.60	3.88E-06
yqiB	0.67	7.17E-04	opuCA	0.60	5.83E-07
rpmA	0.67	3.97E-06	yisB	0.60	3.52E-04
gltT	0.67	3.36E-05	ybaE	0.60	1.23E-05
nrdf	0.67	2.27E-06	yyaE	0.59	1.23E-05
rpmE	0.67	4.69E-06	guaA	0.59	6.53E-09
ndhF	0.67	5.73E-04	spoVE	0.58	2.02E-08
rpmF	0.67	2.10E-06	ssb	0.58	2.11E-07
yoxD	0.66	7.82E-07	rpsD	0.58	5.69E-08
rbfA	0.66	1.08E-06	trpF	0.57	1.76E-09
purN	0.66	1.13E-04	ywtE	0.57	2.95E-07
ycgQ	0.66	1.26E-04	ybcT	0.57	2.84E-11
infC	0.66	1.91E-08	pyrK	0.57	5.51E-06
tig	0.66	1.90E-08	yonC	0.56	6.16E-05
purF	0.66	1.49E-05	ybdD	0.56	2.55E-04
ylbN	0.66	1.05E-09	rplT	0.56	1.55E-10
ylxQ	0.65	4.31E-07	ytzD	0.55	1.32E-04
argB	0.65	2.48E-04	ylqC	0.55	6.97E-08
ybcF	0.65	6.67E-04	rpsP	0.55	1.22E-08
pyrF	0.65	1.02E-05	pyrC	0.54	2.78E-05
yrrR	0.65	2.29E-04	trpC	0.53	9.55E-09
yvhJ	0.65	1.41E-07	ywqA	0.52	2.05E-04
argH	0.65	3.40E-04	hisZ	0.50	1.28E-06
rplL	0.65	1.06E-07	trpB	0.50	5.38E-10
gltB	0.65	7.31E-05	pyrAA	0.48	2.39E-05
yonB	0.64	5.64E-04	pml	0.48	6.84E-05

ywpH	0.47	6.30E-11	ycgM	1.46	1.18E-03
truA	0.46	6.30E-12	ydhG	1.46	2.47E-03
yuiF	0.45	1.06E-09	drm	1.45	1.31E-02
pyrAB	0.41	1.90E-05	yfhM	1.45	3.01E-03
yomV	0.40	5.83E-06	ybgB	1.43	7.27E-03
ybfF	0.40	7.69E-07	yutG	1.43	5.68E-03
yvzA	0.39	1.43E-10	gutP	1.43	4.41E-02
yvpB	0.37	2.66E-07	ybbC	1.43	5.91E-03
yonH	0.33	2.08E-05	yhfC	1.42	1.38E-02
gltA	0.32	9.13E-09	yfiA	1.42	1.08E-03
hisA	0.29	1.09E-10	yjdB	1.42	1.91E-02
yvcA	0.28	3.71E-10	csbX	1.41	3.28E-02
yomW	0.28	1.20E-06	glpF	1.41	1.33E-03
yvcB	0.27	6.85E-09	yqaC	1.41	1.88E-02
hisI	0.24	1.81E-10	ywfE	1.40	5.13E-03
hisB	0.22	6.81E-10	penP	1.40	1.59E-03
hisF	0.22	1.02E-09	gltP	1.40	2.37E-02
hisH	0.21	3.33E-11	amyC	1.40	1.99E-02
hisD	0.19	2.15E-09	yvaY	1.40	2.93E-01
hisG	0.16	1.58E-09	lytS	1.39	9.64E-03
ypqP	3.69	1.76E-03	ykfA	1.39	3.18E-02
yraK	2.57	1.37E-03	dctP	1.39	2.04E-03
rbsK	2.16	4.12E-03	ywsB	1.38	2.27E-03
yrzG	2.12	1.54E-03	manP	1.38	2.17E-03
sacT	1.99	8.06E-02	yqaS	1.37	1.55E-01
ywcE	1.97	1.66E-03	yfiV	1.37	1.78E-02
ytmI	1.93	6.62E-03	ybbF	1.37	5.72E-02
ytzC	1.93	2.07E-01	natB	1.37	8.57E-02
yrdQ	1.93	2.66E-01	iolD	1.36	6.14E-03
yhcU	1.91	1.23E-03	yfiG	1.36	1.53E-03
yjaZ	1.84	3.93E-02	yonT	1.35	2.39E-01
yulB	1.83	3.61E-02	xsa	1.35	5.83E-03
yybK	1.77	5.28E-02	ydeI	1.35	1.54E-03
acoR	1.76	4.82E-03	ssuC	1.34	3.92E-03
araN	1.75	8.53E-02	ybyB	1.34	1.43E-02
manR	1.74	1.35E-03	msmX	1.34	1.81E-02
yotG	1.71	1.60E-01	ydeF	1.34	2.39E-03
glpT	1.69	1.01E-01	ytmL	1.34	9.45E-02
spoIIIC	1.64	2.71E-02	ywrE	1.33	2.03E-01
pDR66	1.63	3.76E-02	yotN	1.33	2.40E-01
yxed	1.61	8.20E-03	manA	1.33	1.26E-01
msmE	1.60	2.84E-02	yonS	1.33	2.09E-02
fnr	1.59	1.22E-01	dppC	1.33	3.51E-02
ytmJ	1.59	7.08E-02	yisY	1.33	3.08E-03
xynB	1.55	1.67E-03	yobB	1.33	4.09E-01
yqcI	1.54	2.55E-02	yteP	1.33	1.74E-01
yslB	1.50	1.68E-02	ywtG	1.33	8.53E-03
ppsE	1.50	2.18E-02	degQ	1.33	2.82E-03
yfiM	1.49	7.98E-02	ydeA	1.33	3.58E-03
yybO	1.49	2.07E-01	iolI	1.32	6.14E-03
cotV	1.49	1.68E-01	sdhC	1.32	1.91E-03
yuiB	1.48	3.24E-02	yrkC	1.32	4.68E-02
ynfE	1.48	4.02E-02	yfkQ	1.32	1.30E-01
yx1C	1.48	2.14E-01	ywbE	1.32	2.40E-01
yqgW	1.47	3.66E-02	yxxE	1.31	1.36E-02
idh	1.47	1.30E-02	guaD	1.31	1.42E-03
iolC	1.47	1.55E-01	yotK	1.31	6.11E-02

yfmJ	1.31	8.57E-02	etfB	1.25	4.21E-03
ppsC	1.31	1.52E-02	perR	1.25	5.37E-03
spoIIR	1.31	6.89E-03	ybbH	1.25	5.74E-03
yeeC	1.31	8.22E-03	yoaP	1.25	1.44E-02
yomQ	1.31	1.35E-01	lrpC	1.25	1.48E-02
ydaD	1.31	2.74E-01	yqkD	1.25	3.84E-01
sigF	1.31	2.21E-03	yqgM	1.25	1.47E-03
nagB	1.31	1.97E-03	cwlJ	1.25	2.93E-01
yodC	1.30	7.45E-03	yrhA	1.25	3.17E-03
ybfB	1.30	9.97E-02	yfiF	1.24	3.03E-01
cgeA	1.30	1.11E-01	yjcH	1.24	1.17E-03
ggt	1.30	2.01E-03	ykrZ	1.24	2.89E-03
ytrC	1.29	9.39E-02	malL	1.24	3.93E-01
tatAD	1.29	8.06E-02	licB	1.24	5.18E-02
ysnD	1.29	3.13E-03	ybbE	1.24	3.65E-02
yccK	1.29	1.16E-03	yxiP	1.24	3.66E-02
ytpI	1.29	1.60E-01	ddl	1.24	1.12E-03
ytmM	1.29	1.64E-02	maeN	1.24	8.76E-03
yjbD	1.29	2.71E-03	yxnA	1.24	2.32E-01
ywcI	1.29	4.81E-02	rapG	1.24	1.41E-03
ywjA	1.29	2.43E-03	yfjB	1.23	3.90E-03
yxmA	1.29	2.72E-01	ypdP	1.23	8.42E-03
spo0E	1.28	1.25E-03	spoVB	1.23	1.05E-01
sigL	1.28	1.35E-02	tatAC	1.23	6.14E-03
yoqB	1.28	5.69E-01	yisK	1.23	1.95E-03
yulD	1.28	8.61E-02	alsD	1.23	9.66E-02
yoaK	1.28	2.69E-01	levR	1.23	1.52E-03
ydhS	1.28	3.29E-03	yolJ	1.23	2.66E-01
yezD	1.28	1.20E-01	ykuE	1.23	2.24E-01
sucD	1.27	2.10E-03	gcvPA	1.23	5.78E-03
spoIIE	1.27	4.08E-01	narI	1.23	1.25E-01
ysdB	1.27	5.96E-03	kdgA	1.23	1.62E-01
yisT	1.27	3.45E-03	yurH	1.23	1.78E-02
yorO	1.27	3.98E-02	ytmN	1.23	1.98E-02
ytbE	1.27	4.93E-02	yorT	1.23	1.05E-01
ydhN	1.27	4.78E-03	spoIVA	1.23	6.44E-02
yflA	1.27	4.16E-02	yrkE	1.22	3.43E-01
gltR	1.27	2.52E-01	ypuE	1.22	9.67E-03
ybxI	1.27	1.69E-02	iolF	1.22	1.02E-01
ytvB	1.27	5.54E-02	yrvN	1.22	1.11E-01
yvsG	1.26	1.04E-03	gcvT	1.22	2.75E-03
nap	1.26	1.88E-02	scoA	1.22	1.68E-03
ppsA	1.26	1.10E-02	yopU	1.22	1.11E-01
yrhH	1.26	2.04E-01	gntK	1.22	4.01E-02
ybbJ	1.26	1.17E-02	ygsG	1.22	3.56E-03
yobE	1.26	1.89E-02	yddK	1.22	4.46E-01
yfiT	1.26	2.11E-02	yjbG	1.22	1.42E-03
yclC	1.26	2.39E-02	yfkT	1.22	2.55E-01
ydfL	1.26	2.90E-02	yckA	1.22	1.26E-01
yitH	1.26	1.25E-03	yfnD	1.22	1.27E-01
yhcS	1.26	3.64E-03	yufQ	1.22	2.20E-03
yxmA	1.26	6.14E-02	yopH	1.21	4.21E-01
yhcN	1.25	1.50E-01	yvdH	1.21	1.12E-01
yocG	1.25	2.20E-02	yjhB	1.21	1.06E-02
yqaQ	1.25	1.30E-01	pucK	1.21	2.97E-01
ywiC	1.25	1.42E-01	yopZ	1.21	5.69E-01
yisI	1.25	1.76E-02	yycO	1.21	2.37E-01



yitR	1.21	9.29E-03	abfA	1.19	1.44E-01
gutB	1.21	5.21E-02	yoaE	1.18	4.76E-03
yhfF	1.21	2.06E-03	acuB	1.18	1.85E-03
ymfK	1.21	1.71E-03	comFB	1.18	1.01E-03
yheE	1.21	1.16E-01	ybaR	1.18	1.28E-01
yitS	1.21	5.86E-03	gsiB	1.18	4.82E-03
yqbT	1.21	1.73E-01	spsC	1.18	3.76E-01
yphF	1.21	2.92E-02	yhjL	1.18	1.10E-02
ytnI	1.21	4.15E-02	cysK	1.18	1.33E-02
ydfO	1.21	2.76E-03	ysbB	1.18	2.44E-02
mecA	1.21	4.02E-03	uxaC	1.18	4.97E-01
ywfd	1.21	6.92E-02	yqbR	1.18	9.93E-02
yx1F	1.21	1.07E-01	yonX	1.18	2.55E-01
kinA	1.21	1.08E-03	yabS	1.18	1.12E-01
ilvH	1.21	3.51E-01	yitN	1.18	4.10E-02
lplD	1.21	7.52E-02	yetJ	1.18	1.51E-02
yopF	1.21	5.99E-03	ydeN	1.18	8.31E-03
nrgB	1.21	8.86E-03	glpD	1.18	4.58E-03
yddI	1.20	1.11E-01	exuR	1.18	1.63E-03
lrpA	1.20	1.33E-01	yodD	1.18	1.15E-01
yomJ	1.20	1.76E-02	yqaN	1.18	2.67E-01
ypjC	1.20	5.38E-02	spsJ	1.18	2.97E-02
yfnC	1.20	1.98E-03	yvgQ	1.18	1.75E-02
slp	1.20	5.53E-03	yofA	1.18	4.92E-02
kdgR	1.20	2.03E-02	yxep	1.18	3.90E-02
yvbK	1.20	8.59E-03	yuiD	1.18	2.10E-03
yqxJ	1.20	5.61E-03	narG	1.18	9.81E-02
yrkK	1.20	6.94E-02	yjbJ	1.18	3.16E-03
yxjH	1.20	3.09E-02	gntR	1.18	1.61E-03
rapK	1.20	5.23E-02	yhjM	1.17	2.45E-03
yaaN	1.20	1.48E-02	phrK	1.17	5.52E-02
aprE	1.20	5.97E-02	bmr	1.17	4.56E-02
acuC	1.20	4.33E-02	yitU	1.17	4.91E-03
glcP	1.20	7.85E-03	sapB	1.17	4.63E-02
yvfr	1.20	8.24E-02	yxaG	1.17	5.06E-01
yktA	1.20	3.62E-03	yyaK	1.17	3.45E-03
ypiF	1.20	8.19E-02	kipI	1.17	5.30E-02
yocF	1.20	6.81E-03	bmrR	1.17	9.38E-03
yhdN	1.20	1.29E-01	rocC	1.17	1.40E-01
lacA	1.19	2.28E-01	yorC	1.17	1.78E-01
ydfJ	1.19	5.65E-02	dctB	1.17	1.67E-01
yitG	1.19	2.68E-02	pycA	1.17	1.54E-01
appD	1.19	1.58E-03	yoqT	1.17	3.38E-01
yaaT	1.19	7.03E-03	ykuI	1.17	5.47E-03
yvnB	1.19	8.33E-02	araQ	1.17	1.23E-01
iolH	1.19	1.47E-02	yusM	1.17	8.66E-02
yesM	1.19	5.29E-02	ylaN	1.17	3.82E-03
ykzD	1.19	6.10E-01	albG	1.17	3.24E-01
yqhV	1.19	2.29E-01	ywjI	1.17	2.15E-02
htrA	1.19	1.14E-03	ydiS	1.17	2.70E-01
ypfB	1.19	2.52E-03	amyE	1.17	3.39E-03
yqdB	1.19	4.59E-02	holB	1.17	4.10E-03
yoqL	1.19	5.34E-01	yppQ	1.17	8.21E-03
yefB	1.19	3.47E-02	ypmP	1.17	1.64E-02
flhO	1.19	5.54E-03	bleo	1.17	4.10E-01
ybbI	1.19	1.27E-02	yhdX	1.17	1.41E-02
yxjB	1.19	1.82E-02	yuaF	1.17	7.08E-02

pabB	1.17	1.47E-03	spoIIQ	1.15	2.99E-01
ypmQ	1.17	6.36E-03	mtn	1.15	1.96E-02
yknT	1.17	4.04E-01	ydfN	1.15	3.23E-02
ykfD	1.17	6.17E-02	yfmK	1.15	4.19E-02
exuT	1.17	4.56E-02	yjfb	1.15	6.65E-03
yxeK	1.17	8.05E-03	sdhB	1.15	1.99E-02
yceF	1.17	1.19E-03	yhdT	1.15	8.57E-03
yxie	1.17	1.01E-01	xynD	1.15	1.03E-01
flgK	1.17	2.15E-03	yhaR	1.15	3.90E-03
dra	1.17	6.00E-03	yacL	1.15	1.45E-03
phrE	1.17	5.61E-03	yoze	1.15	5.18E-02
yvfU	1.17	4.00E-01	yrkM	1.15	6.50E-01
radA	1.16	2.06E-03	ypbS	1.15	7.94E-02
ypjQ	1.16	7.33E-03	ywhA	1.15	9.98E-02
yqbD	1.16	2.16E-01	yvgK	1.15	2.91E-02
spoVAA	1.16	4.12E-02	yvgL	1.15	2.24E-03
adaB	1.16	2.32E-02	yurR	1.15	1.80E-02
yutM	1.16	1.55E-02	yjiB	1.15	1.17E-01
secE	1.16	5.98E-03	yusJ	1.15	2.58E-02
ureB	1.16	2.88E-02	comGB	1.15	2.36E-02
nfrA	1.16	6.83E-02	spo0F	1.15	5.57E-02
xkdC	1.16	8.09E-02	yhbH	1.15	6.24E-02
yqjZ	1.16	1.75E-02	yumC	1.15	1.54E-01
ywcD	1.16	8.53E-02	yoqW	1.15	2.42E-02
bioI	1.16	1.89E-03	yrhG	1.15	2.32E-02
phoR	1.16	5.42E-03	glpK	1.15	1.27E-01
ydhP	1.16	6.39E-01	fliF	1.15	1.24E-03
yfmC	1.16	6.26E-03	yciB	1.15	1.98E-03
csgA	1.16	4.72E-01	glgB	1.15	8.44E-03
comEA	1.16	3.05E-01	ywrF	1.15	1.20E-01
ydbS	1.16	1.86E-03	glyQ	1.15	2.03E-02
licT	1.16	2.00E-03	mela	1.15	1.40E-02
ydbB	1.16	1.02E-02	yocD	1.15	3.59E-02
yqhH	1.16	1.10E-02	ypaA	1.15	3.89E-03
yhaS	1.16	2.43E-02	fliH	1.15	1.81E-03
yhxB	1.16	1.23E-02	yezA	1.14	2.70E-01
yusQ	1.16	5.14E-02	hutH	1.14	4.95E-01
yefC	1.16	1.09E-01	cotJB	1.14	4.68E-01
gerKA	1.16	3.85E-01	dppA	1.14	1.61E-02
mtlA	1.16	5.88E-03	yesZ	1.14	7.27E-02
sipS	1.16	3.98E-03	rbsA	1.14	1.04E-01
yxij	1.16	1.53E-02	ylmC	1.14	1.17E-03
yqhT	1.15	1.60E-02	ydhR	1.14	1.91E-02
yxeI	1.15	1.66E-02	ahpC	1.14	1.92E-02
ytlR	1.15	2.58E-03	ydeL	1.14	1.47E-02
yusF	1.15	2.79E-03	ypmS	1.14	3.31E-02
yfiH	1.15	4.70E-02	yteT	1.14	9.02E-02
yhaJ	1.15	5.37E-02	spoVM	1.14	1.14E-01
resA	1.15	9.79E-03	yhdF	1.14	1.86E-01
clpC	1.15	5.27E-03	aroK	1.14	4.65E-02
yfhG	1.15	9.14E-03	srfAA	1.14	2.03E-01
dppE	1.15	1.52E-02	yoaI	1.14	1.04E-01
ywfC	1.15	5.93E-03	hutM	1.14	4.90E-01
ywmF	1.15	1.81E-01	ywkA	1.14	3.13E-01
pksS	1.15	2.21E-02	yheF	1.14	2.70E-01
yqjN	1.15	2.63E-02	sda	1.14	1.35E-01
yhaO	1.15	1.47E-02	ydjO	1.14	5.84E-02

yrrT	1.14	1.33E-01	yhgC	1.13	1.67E-02
yvdF	1.14	6.72E-02	glpP	1.13	1.93E-02
ydbD	1.14	4.90E-02	rluB	1.13	1.74E-02
coaA	1.14	5.70E-02	padR	1.13	4.77E-02
ypuD	1.14	3.01E-02	yhbA	1.13	1.67E-02
pheA	1.14	8.01E-03	ydjJ	1.13	2.26E-02
ytmO	1.14	9.93E-02	yddM	1.13	2.83E-02
lonA	1.14	1.46E-02	yobV	1.13	1.07E-01
rpmGB	1.14	1.68E-02	ctaC	1.13	1.10E-02
bdbC	1.14	1.95E-02	nupC	1.13	4.28E-02
yoaF	1.14	3.60E-02	divIC	1.13	5.39E-02
mmsA	1.14	4.38E-01	kduD	1.13	7.92E-02
yoaO	1.14	7.97E-03	yttA	1.13	2.16E-02
sspD	1.14	5.09E-01	yrdD	1.13	3.19E-02
ycbC	1.14	5.11E-02	yqzJ	1.13	1.50E-02
licA	1.14	1.56E-02	yfjP	1.12	1.91E-02
ykwD	1.14	5.13E-02	ysiB	1.12	1.79E-01
yrdN	1.14	1.58E-01	fliJ	1.12	7.31E-03
ydiK	1.14	1.30E-02	ywlF	1.12	1.74E-02
yvaG	1.14	1.87E-01	ybaJ	1.12	1.18E-01
yobT	1.14	2.15E-01	polA	1.12	2.53E-02
mcpB	1.14	1.69E-02	ywmE	1.12	2.17E-01
yvaQ	1.13	3.71E-02	tnrA	1.12	1.27E-02
yknU	1.13	2.15E-01	ywaD	1.12	1.89E-01
yosG	1.13	5.51E-01	lcfA	1.12	2.49E-01
yvfF	1.13	1.25E-01	ytpA	1.12	1.49E-02
ydiL	1.13	1.03E-02	yybN	1.12	5.55E-01
yosE	1.13	6.12E-02	yslG	1.12	4.62E-01
yuxN	1.13	2.92E-01	ynaD	1.12	2.84E-02
citT	1.13	4.17E-02	ytmK	1.12	9.39E-02
pucM	1.13	2.26E-01	yjfa	1.12	9.59E-03
yhgB	1.13	3.15E-01	ydiD	1.12	4.65E-03
sspH	1.13	6.85E-03	cdd	1.12	2.56E-02
bioA	1.13	1.18E-03	gcvPB	1.12	2.45E-02
yqjG	1.13	1.21E-01	cypC	1.12	2.60E-02
pstBB	1.13	1.78E-01	yqhP	1.12	8.88E-02
yfjR	1.13	1.20E-01	rsbQ	1.12	1.71E-01
yxaC	1.13	5.70E-02	yqhB	1.12	8.48E-02
yqgL	1.13	6.41E-03	ribA	1.12	1.11E-02
licC	1.13	1.74E-02	hemA	1.12	1.24E-02
yddE	1.13	1.47E-02	yitK	1.12	1.99E-02
gerBB	1.13	4.67E-02	yxeR	1.12	8.86E-02
ydaH	1.13	2.93E-02	yjcM	1.12	3.80E-01
yciC	1.13	6.75E-03	ybaL	1.12	2.54E-02
adaA	1.13	1.81E-01	srfAC	1.12	1.46E-01
ysiA	1.13	6.04E-02	senS	1.12	8.50E-03
comGD	1.13	6.88E-02	yslH	1.12	1.86E-01
yhbF	1.13	2.36E-03	acoA	1.12	5.73E-01
iolB	1.13	1.16E-01	ykuK	1.12	5.13E-02
yvqG	1.13	2.45E-02	yojL	1.12	1.07E-02
ybbP	1.13	6.82E-02	ywdC	1.12	4.45E-01
yhjQ	1.13	4.08E-01	ydaJ	1.12	1.84E-02
yclD	1.13	2.14E-01	yhcY	1.12	9.43E-02
etfA	1.13	8.85E-02	ssuA	1.12	7.44E-02
phrC	1.13	3.93E-02	ydhQ	1.12	4.37E-02
yraO	1.13	4.53E-02	cssR	1.12	3.32E-02
yeaD	1.13	8.85E-03	dppD	1.12	1.60E-01

yetI	1.12	1.14E-01	aroF	1.11	2.93E-02
yerC	1.12	7.66E-03	sucC	1.11	6.51E-02
yugJ	1.12	8.64E-02	yvyF	1.11	1.64E-02
resC	1.12	3.77E-02	thrS	1.11	5.49E-02
yutE	1.12	1.48E-02	yqjV	1.11	2.99E-01
yvfM	1.12	2.02E-01	ydfG	1.11	3.54E-02
yfjA	1.12	3.99E-02	amyD	1.11	7.35E-02
yyzE	1.12	4.78E-01	yneE	1.11	1.77E-01
pksM	1.12	1.04E-02	ydeH	1.11	1.88E-01
yozeB	1.12	3.96E-01	gabR	1.11	3.66E-02
spoIIIAG	1.12	6.21E-02	smpB	1.11	8.44E-02
yomI	1.12	1.24E-01	ampS	1.11	1.07E-02
yfjF	1.12	6.07E-02	pstS	1.11	2.55E-02
yqcF	1.12	1.43E-02	yabA	1.11	8.64E-02
yppC	1.12	9.12E-02	yoqF	1.11	1.53E-01
ypdC	1.12	4.03E-02	yhbB	1.11	7.78E-02
yisR	1.12	1.28E-01	ylaA	1.11	8.23E-02
mntH	1.12	5.73E-01	yugS	1.11	7.75E-02
yuiH	1.12	4.82E-02	glnP	1.11	5.56E-01
lplB	1.12	7.33E-03	yvdD	1.11	3.36E-02
yhdJ	1.12	3.91E-02	yrzF	1.11	9.08E-02
phrF	1.11	1.34E-01	mmgC	1.11	7.85E-02
yneT	1.11	1.09E-01	yczC	1.11	1.60E-01
yxaH	1.11	3.72E-01	yheN	1.11	2.30E-02
cgeB	1.11	4.36E-01	yosD	1.11	4.16E-01
yokL	1.11	2.95E-01	pksI	1.11	2.58E-02
yceG	1.11	3.48E-03	ycnB	1.11	1.81E-01
ykkA	1.11	9.70E-02	ydeG	1.11	2.07E-01
resD	1.11	2.58E-02	rocD	1.11	5.80E-02
yrkD	1.11	3.21E-01	ybdO	1.11	1.84E-02
ywdH	1.11	1.71E-01	yobQ	1.11	1.21E-01
treA	1.11	1.13E-01	yxeM	1.11	1.47E-02
yubD	1.11	1.50E-02	kinB	1.11	6.40E-02
ispA	1.11	1.04E-02	rsbV	1.11	1.32E-02
yocB	1.11	2.26E-02	hutG	1.10	6.22E-01
ytnJ	1.11	7.49E-02	yeaA	1.10	1.86E-02
ylbJ	1.11	3.33E-01	ykvW	1.10	2.51E-01
yqgQ	1.11	2.04E-02	yqzH	1.10	1.92E-01
ylxG	1.11	5.02E-03	mutM	1.10	1.22E-01
yozeO	1.11	4.58E-02	ydiP	1.10	9.63E-02
yndN	1.11	1.90E-01	mtbP	1.10	1.38E-01
ytqI	1.11	7.89E-02	yvzD	1.10	6.23E-02
ypmR	1.11	7.02E-02	yjgB	1.10	1.13E-01
ligB	1.11	5.56E-01	yfkM	1.10	8.55E-03
ppsB	1.11	3.09E-02	amyX	1.10	2.43E-02
yuxG	1.11	5.00E-02	yraE	1.10	5.97E-01
ribH	1.11	3.25E-03	yopY	1.10	4.01E-01
yfjE	1.11	2.14E-02	comGC	1.10	5.30E-01
ydaF	1.11	3.51E-02	yisX	1.10	1.23E-01
ycaI	1.11	7.08E-02	ymaG	1.10	3.66E-02
ykuR	1.11	2.23E-02	ytkC	1.10	3.08E-01
flgL	1.11	4.55E-02	yjjA	1.10	1.29E-02
yqjU	1.11	4.50E-01	citA	1.10	2.50E-01
tlpA	1.11	1.60E-01	ykrA	1.10	2.98E-02
yokE	1.11	6.41E-01	yebD	1.10	7.68E-02
cotH	1.11	5.15E-01	sfp	1.10	7.68E-02
hisJ	1.11	5.18E-02	yvnA	1.10	2.26E-01

hprK	1.10	3.68E-02	gerAA	1.09	3.38E-01
des	1.10	6.85E-02	soj	1.09	7.36E-02
yomP	1.10	5.39E-01	yxjA	1.09	2.06E-01
yxaA	1.10	2.39E-01	mrpG	1.09	4.38E-01
ydfB	1.10	2.32E-01	ydcH	1.09	1.88E-01
thrZ	1.10	4.84E-02	ytxG	1.09	1.46E-02
ycsA	1.10	8.67E-02	ygzB	1.09	4.50E-02
yosC	1.10	3.90E-01	spoIIIJ	1.09	5.79E-02
yckB	1.10	4.00E-01	ytzH	1.09	1.73E-01
appB	1.10	1.08E-01	dacC	1.09	4.06E-02
yteA	1.10	3.35E-01	ylmE	1.09	3.19E-02
padC	1.10	5.09E-01	yqfW	1.09	1.78E-01
yxjN	1.10	5.06E-01	yopG	1.09	6.83E-02
gamA	1.10	9.36E-02	yddJ	1.09	2.85E-02
yocJ	1.10	1.87E-02	yusL	1.09	4.63E-02
ybfP	1.10	1.10E-02	ywsA	1.09	2.18E-01
yjzB	1.10	5.70E-01	ycbR	1.09	2.02E-01
yvqH	1.10	1.85E-02	gerBC	1.09	6.81E-01
bltR	1.10	7.38E-02	ytxO	1.09	3.02E-01
mala	1.10	7.95E-02	yqkF	1.09	2.75E-01
spoIIIAA	1.10	4.55E-02	yobR	1.09	6.61E-02
ywlB	1.10	6.63E-01	yceH	1.09	1.12E-01
ykvZ	1.10	3.59E-02	yorX	1.09	1.21E-01
tatCD	1.10	8.72E-02	yfiK	1.09	2.26E-01
ygaF	1.10	9.58E-02	ycbF	1.09	1.39E-01
ywbF	1.10	2.92E-01	yrdA	1.09	1.22E-01
ykgA	1.10	5.34E-01	nifS	1.09	6.73E-02
yuzF	1.10	1.97E-01	yojJ	1.09	6.07E-02
ycsD	1.10	5.46E-02	yxjB	1.09	2.84E-01
lytD	1.10	5.06E-02	xpaC	1.09	1.04E-01
ykuF	1.10	1.24E-01	rrn	1.09	3.00E-02
ytdP	1.10	1.81E-02	mtlR	1.09	1.73E-01
yvrH	1.10	8.05E-02	ylbF	1.09	6.83E-02
yrrpB	1.10	5.14E-02	yutI	1.09	2.51E-01
yczJ	1.10	2.55E-01	yjaU	1.09	1.67E-01
yhjK	1.10	1.05E-01	yydG	1.09	7.39E-01
ogt	1.10	7.38E-02	pbpE	1.09	1.33E-01
ypqE	1.10	4.47E-02	yycH	1.09	4.04E-02
yaaK	1.10	4.86E-02	yaaH	1.09	8.90E-02
yhcV	1.10	5.76E-01	qcrA	1.09	7.01E-02
sdhA	1.10	1.14E-01	bioD	1.09	5.54E-03
acsA	1.10	7.14E-02	yneP	1.09	2.92E-01
spoIIGA	1.10	5.89E-02	yqkA	1.09	1.15E-01
yqjT	1.10	1.34E-01	yisU	1.09	5.00E-01
ycxC	1.10	8.39E-02	ywch	1.09	6.87E-01
ybxH	1.09	7.04E-02	spsE	1.09	3.80E-01
ydfD	1.09	8.86E-02	ycdF	1.09	6.22E-02
cher	1.09	8.20E-02	mrgA	1.09	2.94E-01
yveA	1.09	4.03E-01	yhaT	1.09	5.58E-01
nhaX	1.09	1.81E-01	ykoH	1.09	3.05E-02
yngE	1.09	1.76E-01	yozP	1.09	8.09E-02
ycbL	1.09	9.30E-02	levG	1.09	2.40E-01
yticG	1.09	8.27E-02	flhP	1.09	1.41E-01
yhfP	1.09	9.39E-02	comER	1.09	9.96E-02
yesE	1.09	1.34E-02	yddH	1.09	5.27E-01
yhfN	1.09	4.69E-02	yccH	1.09	1.60E-01
ytaF	1.09	2.78E-02	citS	1.09	3.41E-02

yrbE	1.09	6.45E-02	ydcI	1.08	9.70E-02
racX	1.09	4.79E-01	ydfK	1.08	6.41E-01
ripX	1.09	8.73E-02	yozaA	1.08	1.79E-01
hprT	1.09	3.68E-01	tlpC	1.08	2.44E-01
ppsD	1.09	2.38E-01	tetL	1.08	3.51E-01
ypbG	1.09	8.42E-02	goxB	1.08	1.15E-02
yjbH	1.09	9.59E-02	yacO	1.08	1.81E-02
yqgA	1.09	2.55E-02	yfkK	1.08	1.92E-01
ypzE	1.08	2.79E-02	kduI	1.08	9.32E-02
yneS	1.08	1.15E-01	yrhC	1.08	4.86E-01
yfkH	1.08	2.08E-01	yxen	1.08	2.35E-01
araA	1.08	1.59E-01	plsX	1.08	2.17E-01
yyaR	1.08	1.11E-01	divIVA	1.08	1.06E-01
ykvU	1.08	9.94E-02	yjcA	1.08	9.12E-02
ycbJ	1.08	1.01E-01	ymzB	1.08	1.95E-01
yeaB	1.08	1.46E-01	ybfJ	1.08	2.37E-01
yxbD	1.08	5.68E-01	yrhI	1.08	3.51E-01
menF	1.08	1.04E-01	yjgA	1.08	2.32E-01
yhcW	1.08	8.31E-02	ykvO	1.08	7.37E-02
mntB	1.08	1.11E-01	ybeC	1.08	1.27E-01
yoaA	1.08	4.85E-01	mcpA	1.08	3.53E-01
yqhS	1.08	9.92E-02	yqcC	1.08	1.02E-01
ydhT	1.08	1.66E-01	ycnL	1.08	6.24E-02
ansA	1.08	3.98E-01	yacP	1.08	8.01E-02
yozaG	1.08	1.28E-01	yqxM	1.08	1.26E-01
ysnA	1.08	6.93E-02	ispE	1.08	2.75E-02
yfiQ	1.08	4.99E-01	gpr	1.08	8.53E-02
ycdA	1.08	4.52E-02	yoxC	1.08	9.18E-02
ylyA	1.08	1.08E-01	yutD	1.08	1.40E-01
zwf	1.08	8.73E-02	tuaB	1.08	3.99E-01
yvgO	1.08	6.51E-02	yshB	1.08	6.36E-02
pdp	1.08	1.50E-01	yflC	1.08	5.16E-01
pksB	1.08	1.52E-01	aroB	1.08	1.59E-01
pucJ	1.08	2.43E-01	nagA	1.08	1.46E-01
acuA	1.08	5.92E-02	glgP	1.08	3.60E-01
ydaS	1.08	1.38E-01	ycbO	1.08	1.09E-01
yfhE	1.08	6.65E-02	ykgB	1.08	1.57E-01
ribD	1.08	2.24E-02	yrhD	1.08	9.19E-02
rsbR	1.08	1.11E-01	yozaR	1.08	4.41E-01
kinE	1.08	1.96E-02	treP	1.08	2.54E-01
ykrV	1.08	1.20E-01	yugU	1.08	1.55E-01
yrkJ	1.08	1.47E-01	ydiF	1.08	6.85E-02
yncD	1.08	6.89E-02	yhcJ	1.08	9.96E-02
usd	1.08	1.55E-01	yjhA	1.08	8.64E-02
sboA	1.08	1.11E-01	ykoD	1.08	4.78E-02
kbl	1.08	2.31E-01	yvtA	1.08	2.67E-01
yraI	1.08	1.23E-01	ykcB	1.08	8.31E-02
cccA	1.08	4.09E-02	yqxD	1.08	1.48E-01
sigB	1.08	5.06E-02	gudB	1.08	2.77E-01
yqzI	1.08	1.52E-01	yknW	1.08	8.39E-02
sigA	1.08	6.13E-02	ykoC	1.08	1.65E-01
yitO	1.08	2.41E-01	yabM	1.08	3.40E-01
yjbK	1.08	7.80E-02	yonR	1.08	1.61E-01
xkdA	1.08	2.40E-01	yraH	1.08	6.72E-02
yfhJ	1.08	4.96E-01	yesL	1.07	4.47E-02
thiG	1.08	4.99E-02	yozaN	1.07	6.10E-01
ydeK	1.08	3.80E-01	ydiG	1.07	6.21E-02

xpf	1.07	5.84E-02	yvyC	1.07	1.96E-01
galT	1.07	2.48E-01	xynA	1.07	3.12E-01
ydeM	1.07	7.03E-02	ansB	1.07	5.51E-01
fbaB	1.07	2.88E-01	yvfe	1.07	2.34E-01
iolE	1.07	1.40E-01	yfkR	1.07	3.63E-01
ydbC	1.07	2.39E-01	yycN	1.07	4.95E-01
yhbD	1.07	1.62E-01	lctP	1.07	2.36E-01
yfmR	1.07	2.34E-01	sigE	1.07	2.58E-01
yfkF	1.07	2.20E-01	yqiK	1.07	1.63E-01
kapB	1.07	2.07E-01	ywaA	1.07	1.49E-01
rapJ	1.07	1.38E-01	citH	1.07	6.64E-01
yhfH	1.07	8.00E-02	yceJ	1.07	2.00E-01
yhxD	1.07	2.16E-01	rodA	1.07	4.57E-01
proB	1.07	3.45E-01	ykrP	1.07	1.22E-01
yitZ	1.07	9.03E-02	rrn	1.07	1.08E-01
ilvD	1.07	8.91E-02	dnaG	1.07	4.30E-02
yonJ	1.07	3.83E-01	yubG	1.07	4.29E-01
cotJC	1.07	1.30E-01	ydjK	1.07	4.76E-01
yxel	1.07	5.18E-02	cotY	1.07	1.20E-01
ydjP	1.07	1.84E-01	yitL	1.07	2.07E-01
spsD	1.07	4.12E-01	cysH	1.07	1.33E-01
bioF	1.07	5.20E-02	pksN	1.07	9.35E-02
ypdQ	1.07	2.69E-01	bdbA	1.07	4.09E-01
yhbE	1.07	1.53E-01	yxkJ	1.07	5.38E-01
yqbG	1.07	4.89E-01	tetB	1.07	1.15E-01
ymfD	1.07	2.77E-01	yycG	1.07	5.77E-02
flgE	1.07	8.39E-02	yetK	1.07	2.95E-01
ycdC	1.07	1.60E-01	gsaB	1.07	1.55E-01
yhdY	1.07	2.45E-02	yqbP	1.07	2.83E-01
ylmD	1.07	6.62E-02	phy	1.07	5.62E-01
ysisP	1.07	5.50E-02	ymfC	1.07	1.74E-01
ytoP	1.07	1.95E-01	fliD	1.07	2.03E-01
yqfN	1.07	3.69E-02	thiE	1.07	1.56E-01
yesF	1.07	2.10E-01	yddf	1.07	1.54E-01
ydeP	1.07	1.13E-01	sodF	1.07	1.74E-01
yoqY	1.07	4.04E-01	ylaD	1.07	4.34E-01
cotD	1.07	1.68E-01	ybdM	1.07	4.45E-01
yunE	1.07	2.66E-01	safA	1.07	1.06E-01
yqjX	1.07	1.94E-01	yotJ	1.07	5.24E-01
yqgE	1.07	3.35E-01	spsI	1.07	4.66E-01
ydaM	1.07	1.86E-01	yddR	1.07	7.04E-01
ydeE	1.07	2.78E-01	hutI	1.07	3.81E-01
citG	1.07	8.00E-02	yhaX	1.07	1.26E-01
yrkR	1.07	3.79E-01	ycbE	1.07	4.39E-01
yhfA	1.07	5.76E-01	yczG	1.07	2.86E-01
ydge	1.07	1.37E-01	spoIIIE	1.07	9.79E-02
yfhK	1.07	1.48E-01	yxiD	1.07	2.22E-01
yaaI	1.07	5.09E-01	ybcS	1.06	4.63E-01
sspM	1.07	1.38E-01	ykqB	1.06	1.72E-01
yngG	1.07	4.64E-01	ydcG	1.06	2.25E-01
ytaP	1.07	2.00E-01	ywlG	1.06	2.03E-01
yqbO	1.07	1.37E-01	ytrI	1.06	3.42E-01
yraB	1.07	1.74E-01	ribE	1.06	9.88E-02
rsbX	1.07	1.65E-01	ytlQ	1.06	1.86E-01
nasD	1.07	1.57E-01	rrn	1.06	1.43E-01
yyaH	1.07	2.52E-01	yfjD	1.06	1.84E-01
yukC	1.07	2.81E-01	ytdI	1.06	1.42E-01

yvgW	1.06	6.76E-01	yorG	1.06	2.67E-01
srfAD	1.06	2.03E-01	yrrD	1.06	2.53E-01
csaA	1.06	2.36E-01	ykoE	1.06	3.36E-02
ypuC	1.06	3.85E-01	ldh	1.06	3.99E-01
paiB	1.06	1.67E-01	yojK	1.06	2.73E-01
ytvA	1.06	4.59E-01	bgaB	1.06	4.66E-01
gabT	1.06	2.53E-01	ytdA	1.06	4.90E-01
iols	1.06	2.55E-01	yueE	1.06	1.98E-01
dacB	1.06	2.15E-01	glcU	1.06	3.87E-01
ypjA	1.06	3.79E-01	yesY	1.06	2.44E-01
lacZ	1.06	3.43E-01	nasA	1.06	6.25E-01
ydze	1.06	1.07E-01	yodB	1.06	2.95E-01
dctS	1.06	2.79E-01	yqhO	1.06	6.33E-01
azlC	1.06	2.69E-01	appF	1.06	2.50E-01
comEC	1.06	2.08E-01	ypgR	1.06	2.10E-01
yqaD	1.06	4.65E-01	ytaB	1.06	8.36E-01
ywqO	1.06	4.44E-01	xkdI	1.06	1.29E-01
yojA	1.06	5.29E-01	ytrA	1.06	2.08E-01
resB	1.06	2.13E-01	yoaH	1.06	2.35E-01
ywsC	1.06	3.37E-01	acdA	1.06	3.81E-01
metE	1.06	5.52E-02	ydaE	1.06	2.86E-01
yxkF	1.06	2.69E-01	ybfA	1.06	2.52E-01
ydcP	1.06	1.68E-01	yfmT	1.06	1.79E-01
yeaC	1.06	2.27E-01	yddA	1.06	3.40E-01
yonG	1.06	4.57E-01	ywgB	1.06	3.01E-01
sigI	1.06	4.28E-01	sat	1.06	8.81E-02
fabHB	1.06	1.68E-01	ywjH	1.06	2.73E-01
ssuD	1.06	9.23E-02	yncE	1.06	2.35E-01
malP	1.06	2.82E-01	ytsB	1.06	1.96E-01
rrn	1.06	2.84E-02	yabG	1.06	2.66E-01
ydbO	1.06	2.42E-01	gntZ	1.06	4.51E-01
yteV	1.06	1.71E-01	ykvR	1.06	2.34E-01
yuxO	1.06	3.12E-01	spoVK	1.06	8.08E-01
yhaG	1.06	3.75E-01	ydjA	1.06	2.25E-01
yesN	1.06	2.48E-01	yflT	1.06	2.48E-01
rrn	1.06	3.13E-01	ypbQ	1.06	5.35E-01
fliI	1.06	1.33E-01	ftsZ	1.06	1.47E-01
yomH	1.06	1.06E-01	ybaS	1.06	3.08E-01
yfhF	1.06	1.43E-01	yfhH	1.06	2.48E-01
yvrI	1.06	2.13E-01	yosI	1.06	2.56E-01
yitC	1.06	2.06E-01	yvaE	1.06	1.74E-01
yfjQ	1.06	1.79E-01	ymfL	1.06	3.51E-01
xkdf	1.06	9.83E-02	yprA	1.06	2.89E-01
yurI	1.06	2.82E-01	yitD	1.06	3.93E-01
ypbB	1.06	1.63E-01	comFA	1.06	3.19E-01
ymaH	1.06	6.29E-02	pksR	1.06	2.64E-01
yraL	1.06	1.12E-01	yndF	1.06	3.70E-01
yorV	1.06	1.69E-01	ycdD	1.06	2.60E-01
expZ	1.06	1.36E-01	bpr	1.06	2.12E-01
yopR	1.06	3.49E-01	ydaK	1.06	5.12E-01
ywbB	1.06	3.66E-01	ycgJ	1.06	1.97E-01
yqbQ	1.06	3.95E-01	mmgD	1.06	5.81E-01
yuaD	1.06	2.62E-01	ykuJ	1.06	3.32E-01
ytiB	1.06	2.36E-01	addA	1.06	9.14E-02
yuzA	1.06	1.92E-01	yugT	1.06	2.64E-01
ctaG	1.06	2.70E-01	czcD	1.06	5.06E-01
yesJ	1.06	2.27E-01	yqcA	1.05	3.58E-01



yppF	1.05	1.06E-01	yrkB	1.05	3.47E-01
ydcQ	1.05	2.67E-01	sipU	1.05	4.09E-01
yjbC	1.05	1.65E-01	resE	1.05	2.55E-01
yopB	1.05	2.73E-01	sodA	1.05	1.83E-01
adhA	1.05	1.84E-01	ysnB	1.05	3.72E-01
yqcB	1.05	5.23E-01	ytpB	1.05	2.74E-01
ylmH	1.05	1.94E-01	degS	1.05	2.90E-01
ywpF	1.05	3.94E-01	yaaJ	1.05	5.01E-01
yqfU	1.05	1.32E-01	ybdJ	1.05	3.42E-01
yfhL	1.05	1.23E-01	cggR	1.05	4.23E-01
yomL	1.05	3.67E-01	rsbW	1.05	2.82E-01
yrkI	1.05	3.40E-01	ydeJ	1.05	3.67E-01
ypeB	1.05	5.29E-01	yneR	1.05	3.23E-01
yosA	1.05	1.72E-01	ywmC	1.05	3.63E-01
yorR	1.05	7.00E-01	yvcS	1.05	4.17E-01
fliG	1.05	6.50E-02	yveM	1.05	3.25E-01
uvrB	1.05	3.53E-01	yufM	1.05	3.76E-01
yesP	1.05	4.53E-01	pgi	1.05	1.62E-01
ybcL	1.05	1.99E-01	licR	1.05	4.00E-01
gabD	1.05	1.19E-01	yhfO	1.05	3.72E-01
ydhM	1.05	2.24E-01	srfAB	1.05	5.44E-01
yqbN	1.05	2.17E-01	ribT	1.05	2.00E-01
ytoI	1.05	2.20E-01	ylxF	1.05	2.42E-01
yitA	1.05	4.16E-01	yfkD	1.05	2.95E-01
yjbM	1.05	2.30E-01	ylaM	1.05	2.93E-01
yabP	1.05	4.95E-01	yrkG	1.05	6.54E-01
kipA	1.05	3.52E-01	yopO	1.05	4.69E-01
yoaS	1.05	6.47E-01	yddT	1.05	3.78E-01
yacK	1.05	2.54E-01	yddb	1.05	7.17E-01
yvdC	1.05	3.78E-01	ecsA	1.05	3.70E-01
ysxC	1.05	3.25E-01	ykyA	1.05	2.57E-01
yvgP	1.05	4.47E-01	yesK	1.05	2.07E-01
yrzL	1.05	2.21E-01	yjlB	1.05	1.94E-01
ypjB	1.05	4.13E-01	yoaR	1.05	3.42E-01
ydgC	1.05	3.96E-01	yfkL	1.05	4.24E-01
yxCE	1.05	1.90E-01	ylmG	1.05	3.70E-01
yjKB	1.05	3.69E-01	yoaV	1.05	7.87E-01
yesV	1.05	2.30E-01	yuaI	1.05	4.45E-01
yoqE	1.05	8.16E-01	ypfD	1.05	2.59E-01
ydfC	1.05	4.23E-01	yqgB	1.05	5.11E-01
yfnI	1.05	2.10E-01	comA	1.05	3.01E-01
maa	1.05	6.71E-01	ydhD	1.05	6.38E-01
yulF	1.05	2.29E-01	ytoA	1.05	4.73E-01
ykvV	1.05	2.39E-01	spoVID	1.05	7.32E-01
sacV	1.05	2.39E-01	yxxF	1.05	2.01E-01
yqzB	1.05	2.17E-01	leuD	1.05	4.49E-01
yccG	1.05	2.60E-01	yppC	1.05	2.76E-01
yitE	1.05	5.67E-01	yerI	1.05	3.08E-01
yesR	1.05	1.99E-01	yteU	1.05	5.80E-01
ytcB	1.05	2.76E-01	cotX	1.05	3.64E-01
gerPA	1.05	2.48E-01	ydhJ	1.05	3.26E-01
araD	1.05	2.30E-01	ytkP	1.05	5.97E-01
sbcD	1.05	1.89E-01	recG	1.05	3.39E-01
spmA	1.05	2.73E-01	gerKB	1.05	3.88E-01
tyrZ	1.05	8.02E-01	luxS	1.05	2.82E-01
msmR	1.05	7.39E-01	yhfI	1.05	5.05E-01
ykbA	1.05	3.36E-01	comFC	1.05	3.62E-01

yuxJ	1.05	6.35E-01	hxlR	1.04	3.72E-01
spsB	1.04	4.65E-01	yfiR	1.04	3.12E-01
yeeD	1.04	6.77E-01	ylnD	1.04	3.03E-01
nprB	1.04	3.77E-01	yrrS	1.04	3.50E-01
metA	1.04	2.95E-01	ydcO	1.04	3.99E-01
ypwA	1.04	3.12E-01	yxiK	1.04	5.15E-01
abnA	1.04	3.00E-01	yngK	1.04	1.62E-01
fliS	1.04	3.54E-01	mleA	1.04	5.15E-01
yodU	1.04	4.46E-01	yorJ	1.04	3.31E-01
gamP	1.04	2.38E-01	ywrO	1.04	6.79E-01
yjiC	1.04	6.99E-01	spoVAF	1.04	3.92E-01
yqiG	1.04	3.78E-01	ysisQ	1.04	4.49E-01
yhjO	1.04	4.05E-01	yydA	1.04	4.87E-01
dnaX	1.04	5.79E-01	yqfA	1.04	2.12E-01
smf	1.04	3.92E-01	yurG	1.04	4.49E-01
sacC	1.04	2.70E-01	yqcD	1.04	3.90E-01
yngA	1.04	2.76E-01	ydfs	1.04	3.29E-01
yvrP	1.04	3.81E-01	albE	1.04	6.09E-01
ylaI	1.04	4.17E-01	adeC	1.04	1.95E-01
fliT	1.04	4.00E-01	yybL	1.04	5.94E-01
hmp	1.04	5.60E-01	yjkA	1.04	7.35E-01
ydhC	1.04	3.54E-01	yhdQ	1.04	4.37E-01
jag	1.04	3.38E-01	ysaA	1.04	3.02E-01
ykzB	1.04	3.08E-01	yobS	1.04	4.96E-01
yoaN	1.04	6.03E-01	yodI	1.04	3.90E-01
ywlC	1.04	3.33E-01	menB	1.04	4.42E-01
ydjC	1.04	5.71E-01	yorN	1.04	3.99E-01
ytaG	1.04	3.57E-01	dctR	1.04	6.41E-01
yqeF	1.04	3.43E-01	aroC	1.04	3.62E-01
ypuB	1.04	5.72E-01	eag	1.04	1.85E-01
yfjM	1.04	3.30E-01	gerKC	1.04	2.49E-01
yitW	1.04	5.29E-01	gapB	1.04	3.56E-01
yqhL	1.04	4.23E-01	yrkO	1.04	6.30E-01
yloC	1.04	3.99E-01	yukE	1.04	3.74E-01
yomR	1.04	5.64E-01	yraM	1.04	5.11E-01
ysoA	1.04	4.75E-01	yocA	1.04	5.02E-01
yhdU	1.04	5.74E-01	yodN	1.04	4.74E-01
yurY	1.04	1.87E-01	yesO	1.04	6.05E-01
ylaB	1.04	3.67E-01	rrn	1.04	1.41E-01
yrkN	1.04	4.61E-01	panB	1.04	4.21E-01
pbpA	1.04	3.19E-01	cypA	1.04	6.25E-01
cysC	1.04	3.22E-01	yvbJ	1.04	4.92E-01
ywjG	1.04	4.10E-01	ytbQ	1.04	3.60E-01
yyxA	1.04	2.90E-01	yjbX	1.04	2.51E-01
dacF	1.04	3.21E-01	yngJ	1.04	3.01E-01
yhaM	1.04	3.08E-01	yaaD	1.04	2.06E-01
ypbH	1.04	4.02E-01	ytfI	1.04	4.62E-01
ecsC	1.04	3.63E-01	yueD	1.04	3.65E-01
ydhL	1.04	5.25E-01	yokG	1.04	8.60E-01
csbC	1.04	4.27E-01	ythQ	1.04	7.16E-01
yxbG	1.04	2.59E-01	glcK	1.04	2.64E-01
yojH	1.04	4.61E-01	ybfQ	1.04	4.81E-01
comGE	1.04	4.90E-01	yumB	1.04	4.33E-01
rsbU	1.04	3.97E-01	yheG	1.04	4.58E-01
yhaL	1.04	5.84E-01	ywcC	1.04	5.41E-01
ycbP	1.04	7.72E-01	yfmG	1.04	3.84E-01
ccpB	1.04	6.33E-01	ydfH	1.04	4.89E-01

yjoB	1.04	3.75E-01	ydbL	1.03	4.88E-01
yybP	1.04	3.53E-01	bhlB	1.03	7.04E-01
yjlA	1.04	4.00E-01	ytcA	1.03	4.35E-01
yfmS	1.04	5.26E-01	yhjR	1.03	4.28E-01
yflM	1.04	5.48E-01	ywqG	1.03	7.95E-01
ylmF	1.04	3.66E-01	cwlA	1.03	6.11E-01
cheV	1.04	4.99E-01	yokH	1.03	4.48E-01
yvbW	1.04	6.42E-01	xkdE	1.03	5.93E-01
ycxB	1.04	6.96E-01	yvdE	1.03	5.65E-01
metS	1.04	5.36E-01	sigX	1.03	3.83E-01
lytE	1.04	6.25E-01	yoZK	1.03	6.92E-01
yuaG	1.04	3.55E-01	yusK	1.03	2.87E-01
yqgP	1.03	3.37E-01	yclG	1.03	7.88E-01
yaaL	1.03	4.13E-01	yccF	1.03	4.85E-01
yqaJ	1.03	4.47E-01	ywoF	1.03	5.32E-01
yrhO	1.03	4.39E-01	yfiB	1.03	4.33E-01
yxEO	1.03	4.09E-01	yunF	1.03	5.28E-01
yqxA	1.03	6.92E-01	dsdA	1.03	6.49E-01
yyaM	1.03	8.02E-01	ybeF	1.03	7.22E-01
adhB	1.03	4.84E-01	yklA	1.03	4.82E-01
yojO	1.03	5.69E-01	yuzC	1.03	4.74E-01
iolR	1.03	5.54E-01	yraD	1.03	6.32E-01
recN	1.03	3.72E-01	bglC	1.03	5.99E-01
yueK	1.03	4.58E-01	ydeT	1.03	4.84E-01
yqbF	1.03	6.31E-01	mgsA	1.03	7.77E-01
yrhK	1.03	6.08E-01	yfhD	1.03	4.88E-01
yqiI	1.03	4.83E-01	msrA	1.03	6.09E-01
yhaI	1.03	4.84E-01	rsbS	1.03	3.87E-01
yhaH	1.03	4.11E-01	yerB	1.03	5.50E-01
levE	1.03	3.38E-01	yugK	1.03	4.96E-01
yjmF	1.03	7.85E-01	gbsB	1.03	7.84E-01
yurK	1.03	5.00E-01	sdaAB	1.03	4.68E-01
yaaA	1.03	2.92E-01	yoqP	1.03	5.27E-01
yqkB	1.03	5.40E-01	seaA	1.03	5.40E-01
ylaC	1.03	4.59E-01	ctaB	1.03	6.91E-01
yqfL	1.03	5.29E-01	tuaF	1.03	6.16E-01
yqgC	1.03	4.03E-01	yodE	1.03	6.15E-01
yveT	1.03	5.35E-01	lmrA	1.03	5.45E-01
yppD	1.03	3.33E-01	mntD	1.03	4.50E-01
cgeC	1.03	6.79E-01	uxaA	1.03	3.82E-01
comC	1.03	7.13E-01	yonV	1.03	6.72E-01
yodL	1.03	6.62E-01	ytfP	1.03	3.94E-01
yufN	1.03	3.03E-01	yorY	1.03	5.78E-01
yosH	1.03	5.04E-01	yheH	1.03	5.71E-01
yclI	1.03	4.24E-01	pksF	1.03	3.56E-01
ytsA	1.03	6.28E-01	fabI	1.03	5.52E-01
yusU	1.03	5.78E-01	yviA	1.03	5.55E-01
yosL	1.03	6.69E-01	ysfE	1.03	6.17E-01
yybI	1.03	4.34E-01	ymaE	1.03	4.39E-01
yteS	1.03	5.99E-01	yrkH	1.03	5.70E-01
sspL	1.03	5.26E-01	yvoA	1.03	7.14E-01
ykkC	1.03	5.36E-01	ycbH	1.03	6.27E-01
ydcN	1.03	3.99E-01	dnaI	1.03	5.49E-01
yrxA	1.03	4.83E-01	yqbE	1.03	5.06E-01
yqhG	1.03	7.80E-01	ywqL	1.03	7.12E-01
ynfF	1.03	3.24E-01	yqjY	1.03	5.63E-01
ydhK	1.03	5.42E-01	spoIIP	1.03	7.90E-01

yhxC	1.03	5.37E-01	yacD	1.02	7.42E-01
ylmA	1.03	4.74E-01	xtmB	1.02	5.85E-01
ydaL	1.03	6.87E-01	yjcC	1.02	6.32E-01
yjbI	1.03	6.41E-01	yqfG	1.02	5.26E-01
yfnH	1.03	6.38E-01	bcsA	1.02	7.35E-01
ynxB	1.03	5.06E-01	yydB	1.02	6.74E-01
spsA	1.03	7.92E-01	yqbL	1.02	7.16E-01
mrpD	1.03	8.01E-01	pps	1.02	8.48E-01
ytzB	1.03	5.18E-01	yqjK	1.02	5.87E-01
yhdI	1.03	5.83E-01	mmgB	1.02	8.21E-01
yqkC	1.03	6.82E-01	yqfC	1.02	6.56E-01
ydaT	1.03	7.57E-01	csrA	1.02	7.56E-01
yclJ	1.03	6.14E-01	ywbD	1.02	7.82E-01
yoaW	1.03	6.33E-01	pheB	1.02	6.33E-01
yhdR	1.03	6.36E-01	ybdK	1.02	6.24E-01
yhdW	1.03	7.09E-01	mrpE	1.02	7.55E-01
yaaC	1.03	6.24E-01	yflD	1.02	5.89E-01
mmgA	1.03	4.04E-01	yjgD	1.02	6.88E-01
cotS	1.03	5.57E-01	lgt	1.02	6.56E-01
yddN	1.03	4.99E-01	yorQ	1.02	5.72E-01
ykfB	1.03	6.44E-01	gerD	1.02	7.77E-01
yacN	1.03	6.62E-01	ywfA	1.02	8.58E-01
thiD	1.03	6.97E-01	ygaC	1.02	6.65E-01
yosB	1.03	8.68E-01	yvjA	1.02	6.72E-01
yqfX	1.03	5.93E-01	ywhC	1.02	6.23E-01
yvqF	1.03	6.56E-01	yqeC	1.02	5.80E-01
pel	1.03	7.70E-01	yueC	1.02	6.91E-01
spsF	1.03	7.89E-01	dfrA	1.02	7.31E-01
ykoY	1.03	6.17E-01	ccpC	1.02	7.20E-01
pabA	1.03	5.61E-01	csbA	1.02	6.47E-01
yacM	1.03	5.26E-01	ykoP	1.02	8.53E-01
menD	1.03	7.52E-01	yorB	1.02	6.75E-01
fliK	1.03	5.29E-01	yonO	1.02	7.18E-01
ykoN	1.03	6.85E-01	yfjL	1.02	8.05E-01
ywgA	1.02	6.46E-01	ylbB	1.02	8.15E-01
ycnC	1.02	5.92E-01	alaR	1.02	7.16E-01
ahrC	1.02	5.87E-01	yvqE	1.02	6.57E-01
dnaE	1.02	8.10E-01	yheI	1.02	7.13E-01
ytwF	1.02	6.52E-01	yutC	1.02	7.36E-01
ypzA	1.02	8.14E-01	ypsA	1.02	5.13E-01
rph	1.02	6.04E-01	ycbM	1.02	7.87E-01
ydfF	1.02	6.16E-01	xlyB	1.02	7.17E-01
ytiP	1.02	5.82E-01	yusN	1.02	6.64E-01
yopP	1.02	6.47E-01	fliZ	1.02	5.80E-01
yugE	1.02	6.16E-01	yukA	1.02	6.31E-01
yqgV	1.02	6.82E-01	trxA	1.02	7.83E-01
ycsN	1.02	7.21E-01	yqzG	1.02	8.50E-01
cotE	1.02	7.11E-01	ykfC	1.02	6.01E-01
yvfS	1.02	5.97E-01	ydcF	1.02	6.66E-01
sspK	1.02	5.48E-01	xkdS	1.02	4.56E-01
ykkD	1.02	7.48E-01	yesT	1.02	7.66E-01
yvlA	1.02	7.12E-01	yopQ	1.02	7.16E-01
ydfP	1.02	7.42E-01	yfkI	1.02	5.70E-01
pbpF	1.02	5.83E-01	yhfD	1.02	7.80E-01
yorF	1.02	7.17E-01	ymaC	1.02	4.82E-01
yvbT	1.02	5.99E-01	glcT	1.02	6.95E-01
ydaP	1.02	7.15E-01	yknZ	1.02	6.67E-01

fabD	1.02	7.53E-01	yqhA	1.02	7.41E-01
ykuT	1.02	6.39E-01	comGG	1.02	9.01E-01
yxzE	1.02	6.84E-01	spsG	1.01	7.85E-01
atpI	1.02	7.74E-01	yckD	1.01	9.25E-01
ypbR	1.02	6.15E-01	ybdL	1.01	7.51E-01
yobJ	1.02	5.37E-01	ytnP	1.01	7.45E-01
yxzF	1.02	7.75E-01	rapF	1.01	8.55E-01
yaaE	1.02	5.67E-01	yrdB	1.01	7.60E-01
ywnF	1.02	7.98E-01	nasC	1.01	8.90E-01
yvdQ	1.02	6.16E-01	pucE	1.01	7.69E-01
lytF	1.02	7.08E-01	degA	1.01	9.24E-01
tpx	1.02	7.70E-01	pspA	1.01	8.33E-01
rapB	1.02	6.70E-01	sbp	1.01	7.65E-01
cotJA	1.02	6.62E-01	comP	1.01	7.09E-01
ywhL	1.02	8.13E-01	yobM	1.01	7.38E-01
prsA	1.02	6.23E-01	xepA	1.01	8.06E-01
yesW	1.02	9.02E-01	yndB	1.01	7.93E-01
ywkB	1.02	7.89E-01	ytjP	1.01	7.97E-01
sleB	1.02	8.12E-01	yonU	1.01	9.00E-01
tuaG	1.02	7.16E-01	yqfP	1.01	8.23E-01
yddC	1.02	7.03E-01	yxaM	1.01	7.94E-01
mcsA	1.02	6.71E-01	yt1B	1.01	8.91E-01
yqxK	1.02	7.64E-01	ycgE	1.01	7.47E-01
ypiA	1.02	7.30E-01	cysP	1.01	7.24E-01
sigV	1.02	7.50E-01	yocK	1.01	6.86E-01
citM	1.02	6.69E-01	yndA	1.01	9.33E-01
yclH	1.02	7.81E-01	yocI	1.01	8.29E-01
yvaC	1.02	6.98E-01	yqbH	1.01	7.19E-01
htpG	1.02	7.39E-01	glyA	1.01	8.76E-01
sspO	1.02	8.49E-01	ytnL	1.01	9.29E-01
yybE	1.02	8.08E-01	ydcK	1.01	7.70E-01
ypuF	1.02	6.42E-01	yx1E	1.01	7.87E-01
pcp	1.02	7.17E-01	ydcT	1.01	8.29E-01
kinD	1.02	7.15E-01	ydgH	1.01	9.23E-01
tuaA	1.02	7.04E-01	yitP	1.01	8.16E-01
pstC	1.02	8.93E-01	yomF	1.01	6.78E-01
ykoG	1.02	6.77E-01	yqaK	1.01	8.62E-01
yopE	1.02	7.26E-01	yyaT	1.01	9.07E-01
proI	1.02	6.86E-01	ydhO	1.01	8.99E-01
yugP	1.02	6.61E-01	yqbJ	1.01	9.27E-01
sunA	1.02	7.44E-01	t1pB	1.01	8.27E-01
yabT	1.02	7.87E-01	yhdS	1.01	8.94E-01
xtrA	1.02	7.51E-01	xkdV	1.01	9.03E-01
spoVAE	1.02	7.21E-01	ypvA	1.01	7.97E-01
yhcM	1.02	8.21E-01	sspG	1.01	8.14E-01
mta	1.02	7.67E-01	yhfL	1.01	8.15E-01
mscL	1.02	7.25E-01	ytrB	1.01	7.98E-01
yloB	1.02	7.13E-01	yqjP	1.01	7.82E-01
yfkJ	1.02	7.13E-01	ylzA	1.01	7.73E-01
yhcO	1.02	8.70E-01	ysnF	1.01	9.29E-01
ywdJ	1.02	8.52E-01	ycbA	1.01	8.01E-01
yezE	1.02	7.10E-01	yaaO	1.01	8.38E-01
yx1A	1.02	8.43E-01	yycA	1.01	8.87E-01
yqfF	1.02	8.23E-01	ydhH	1.01	6.82E-01
yhjG	1.02	7.19E-01	ydaN	1.01	8.22E-01
yufS	1.02	7.79E-01	yyzB	1.01	7.74E-01
yqaI	1.02	7.47E-01	nucB	1.01	7.96E-01

ypgQ	1.01	7.74E-01	yueB	1.01	8.97E-01
pucC	1.01	9.51E-01	ytmB	1.01	8.68E-01
yrhE	1.01	8.32E-01	yvqC	1.01	8.97E-01
yubB	1.01	7.91E-01	yflN	1.01	8.95E-01
yvcP	1.01	8.59E-01	yufL	1.01	8.70E-01
yodR	1.01	9.23E-01	pgcM	1.01	8.86E-01
comS	1.01	9.01E-01	yclE	1.01	8.93E-01
pucH	1.01	7.93E-01	mntC	1.01	8.82E-01
ydgJ	1.01	7.97E-01	ykoJ	1.01	8.60E-01
yxec	1.01	8.36E-01	ykcA	1.01	9.56E-01
cydC	1.01	9.54E-01	yomU	1.01	8.97E-01
yoqK	1.01	7.89E-01	yukB	1.01	8.97E-01
spoIVB	1.01	9.20E-01	yhcZ	1.01	8.62E-01
yniT	1.01	9.69E-01	glgC	1.01	8.71E-01
ydgF	1.01	8.85E-01	ydeC	1.01	9.50E-01
yyaB	1.01	9.16E-01	yufP	1.01	8.80E-01
yorA	1.01	8.44E-01	yisN	1.01	9.00E-01
spo0B	1.01	8.54E-01	yycB	1.01	8.81E-01
yxec	1.01	8.40E-01	yoZD	1.01	9.40E-01
ycbK	1.01	8.10E-01	sspF	1.01	8.93E-01
yyaP	1.01	8.59E-01	ywjD	1.01	9.46E-01
yflH	1.01	8.12E-01	kipR	1.01	9.33E-01
ywqC	1.01	8.56E-01	phoP	1.01	9.23E-01
yfiC	1.01	8.75E-01	ctpA	1.01	9.32E-01
ppaC	1.01	8.91E-01	ywbC	1.01	9.15E-01
yqcE	1.01	9.17E-01	ykkB	1.01	9.64E-01
yolF	1.01	9.56E-01	pksA	1.01	9.16E-01
yflK	1.01	8.13E-01	yckC	1.01	9.38E-01
yqfY	1.01	8.55E-01	spo0J	1.01	9.14E-01
yjcR	1.01	9.23E-01	xkdG	1.00	9.09E-01
yknY	1.01	8.78E-01	yvrO	1.00	9.16E-01
ynaG	1.01	8.80E-01	yrrL	1.00	9.22E-01
xre	1.01	8.70E-01	yoqH	1.00	9.64E-01
yqhR	1.01	9.34E-01	ytkL	1.00	9.11E-01
fliY	1.01	8.25E-01	kinC	1.00	8.66E-01
yvlC	1.01	8.77E-01	cotSA	1.00	9.26E-01
accC	1.01	8.64E-01	ytxJ	1.00	9.23E-01
yugF	1.01	8.37E-01	ydiC	1.00	9.19E-01
yxdJ	1.01	8.33E-01	ykhA	1.00	9.38E-01
yjbB	1.01	8.93E-01	zur	1.00	9.28E-01
yhjJ	1.01	8.19E-01	csbB	1.00	9.31E-01
efp	1.01	8.77E-01	spoVFA	1.00	9.27E-01
yrkS	1.01	8.80E-01	xhlA	1.00	9.19E-01
spoVC	1.01	8.98E-01	araM	1.00	9.25E-01
ybgH	1.01	9.55E-01	yqfB	1.00	9.29E-01
yfmF	1.01	8.57E-01	yclB	1.00	9.57E-01
fliL	1.01	8.22E-01	acoL	1.00	9.47E-01
yurV	1.01	8.04E-01	lacR	1.00	9.23E-01
yydH	1.01	9.64E-01	ypfA	1.00	9.19E-01
yycR	1.01	9.40E-01	hemAT	1.00	9.29E-01
yjcO	1.01	9.46E-01	yoaQ	1.00	9.70E-01
yueH	1.01	8.48E-01	yoqS	1.00	9.67E-01
yhdZ	1.01	9.18E-01	yqaB	1.00	9.89E-01
yticQ	1.01	8.53E-01	yhdB	1.00	9.91E-01
yqxI	1.01	8.58E-01	yycE	1.00	9.29E-01
bsaA	1.01	8.91E-01	degU	1.00	9.27E-01
yusZ	1.01	8.95E-01	ykuS	1.00	9.47E-01

ydhB	1.00	9.63E-01	ykzA	1.00	9.92E-01
yjgC	1.00	9.64E-01	lipA	1.00	9.92E-01
mmgE	1.00	9.56E-01	cotA	1.00	9.96E-01
deoR	1.00	9.51E-01	groEL	1.00	9.88E-01
ypgA	1.00	9.45E-01	yuxL	1.00	9.92E-01
yybC	1.00	9.81E-01	ytlA	1.00	9.88E-01
yulE	1.00	9.65E-01	uvrC	1.00	9.89E-01
tdh	1.00	9.86E-01	ytxH	1.00	9.82E-01
clpE	1.00	9.41E-01	yceI	1.00	9.78E-01
yonI	1.00	9.68E-01	yvjB	1.00	9.86E-01
yflJ	1.00	9.42E-01	yvlB	1.00	9.80E-01
yfkO	1.00	9.72E-01	yvgY	1.00	9.73E-01
yosW	1.00	9.70E-01	yfmM	1.00	9.83E-01
yvaD	1.00	9.47E-01	ycdB	1.00	9.62E-01
yusS	1.00	9.77E-01	yjoA	1.00	9.79E-01
yhdO	1.00	9.57E-01	yraF	1.00	9.85E-01
comQ	1.00	9.60E-01	ydbK	1.00	9.78E-01
moaE	1.00	9.35E-01	cotW	1.00	9.94E-01
ykzG	1.00	9.62E-01	ysfB	1.00	9.80E-01
relA	1.00	9.52E-01	yrzA	1.00	9.78E-01
ycbD	1.00	9.71E-01	yxzE	1.00	9.69E-01
yjqB	1.00	9.59E-01	cstA	1.00	9.64E-01
yppE	1.00	9.86E-01	yktC	1.00	9.73E-01
yvgX	1.00	9.46E-01	yerD	1.00	9.68E-01
yfhP	1.00	9.81E-01	yjzC	1.00	9.71E-01
yrdr	1.00	9.87E-01	yomG	1.00	9.68E-01
yqfO	1.00	9.70E-01	ynbB	1.00	9.64E-01
yonA	1.00	9.73E-01	murE	1.00	9.40E-01
xtmA	1.00	9.70E-01	ybfO	1.00	9.89E-01
ykcc	1.00	9.73E-01	bioB	1.00	9.30E-01
yfmF	1.00	9.86E-01	cwlH	1.00	9.69E-01
yybM	1.00	9.91E-01	ypdA	1.00	9.53E-01
appC	1.00	9.77E-01	rocR	1.00	9.42E-01
yczH	1.00	9.90E-01	yqhQ	1.00	9.57E-01
fliR	1.00	9.84E-01	slr	1.00	9.47E-01
yabO	1.00	9.90E-01	yunD	1.00	9.61E-01
lytA	1.00	9.91E-01	ytsP	1.00	9.40E-01
ywcA	1.00	9.92E-01	ysfC	1.00	9.36E-01
yosZ	1.00	9.92E-01	ytmA	1.00	9.14E-01
yqbB	1.00	9.93E-01	ytsD	1.00	9.66E-01
yncF	1.00	9.94E-01	uvrA	1.00	9.61E-01
yoxB	1.00	9.97E-01	spoIIAA	1.00	9.50E-01
ygza	1.00	9.97E-01	sipW	1.00	9.65E-01
yetA	1.00	9.99E-01	yopA	1.00	9.60E-01
ypuA	1.00	9.99E-01	rsbT	1.00	9.21E-01
ypnP	1.00	1.00E+00	ydbA	1.00	9.67E-01
yxcD	1.00	9.99E-01	yokK	1.00	9.41E-01
pucA	1.00	9.98E-01	ytpP	1.00	9.48E-01
yngI	1.00	9.97E-01	yphA	1.00	9.43E-01
yoqO	1.00	9.99E-01	yktD	1.00	9.31E-01
tagO	1.00	9.96E-01	ydbT	1.00	9.10E-01
yfmE	1.00	9.94E-01	splB	1.00	9.72E-01
yheB	1.00	9.94E-01	abrB	1.00	9.42E-01
yurX	1.00	9.89E-01	ybfN	1.00	9.48E-01
yqfT	1.00	9.97E-01	yxkD	1.00	9.14E-01
accB	1.00	9.92E-01	yocH	1.00	9.45E-01
yfkE	1.00	9.90E-01	ytkD	1.00	9.60E-01

yvfK	1.00	9.41E-01	ytcD	0.99	8.09E-01
pucD	1.00	9.34E-01	citZ	0.99	9.09E-01
amyQ	1.00	9.65E-01	sigG	0.99	8.56E-01
yhcX	1.00	9.57E-01	yvcL	0.99	8.44E-01
ykvI	1.00	9.68E-01	narH	0.99	9.10E-01
fliP	1.00	9.21E-01	ygxA	0.99	8.58E-01
ydgG	1.00	9.25E-01	ymfG	0.99	8.97E-01
yocM	1.00	9.33E-01	rocG	0.99	9.66E-01
ywpJ	1.00	9.37E-01	folC	0.99	8.34E-01
alsR	1.00	9.54E-01	phoH	0.99	8.37E-01
yhdE	1.00	9.35E-01	ycgF	0.99	8.62E-01
yoqI	1.00	9.68E-01	ysfD	0.99	8.89E-01
ydeS	1.00	9.06E-01	narK	0.99	8.55E-01
yvft	1.00	9.13E-01	yusE	0.99	7.63E-01
yqjB	1.00	9.57E-01	bdbD	0.99	8.23E-01
ypeP	1.00	9.73E-01	yhjN	0.99	8.59E-01
yraJ	1.00	9.29E-01	yorK	0.99	8.54E-01
yrzC	1.00	9.08E-01	ydjM	0.99	8.28E-01
yxiM	1.00	9.19E-01	ybxA	0.99	7.68E-01
hutU	0.99	9.03E-01	glgD	0.99	6.77E-01
yvdS	0.99	9.45E-01	yizA	0.99	9.14E-01
ymzD	0.99	9.02E-01	yjbP	0.99	8.04E-01
ylbG	0.99	9.22E-01	rsbP	0.99	8.38E-01
ylaL	0.99	9.30E-01	spsK	0.99	9.55E-01
yomS	0.99	8.99E-01	addB	0.99	8.03E-01
ywpG	0.99	9.22E-01	yebC	0.99	8.76E-01
ydbP	0.99	9.46E-01	ytnM	0.99	8.81E-01
mntA	0.99	8.80E-01	yvdG	0.99	7.95E-01
yuzD	0.99	8.86E-01	yrbC	0.99	7.08E-01
recR	0.99	9.00E-01	menE	0.99	9.35E-01
ylbO	0.99	9.15E-01	ysmB	0.99	8.05E-01
ybfK	0.99	8.84E-01	ywff	0.99	8.31E-01
yqhM	0.99	8.94E-01	serC	0.99	8.12E-01
xkdO	0.99	9.40E-01	yosJ	0.99	9.00E-01
cypX	0.99	9.27E-01	yfmD	0.99	8.04E-01
ybfE	0.99	9.14E-01	pabC	0.99	8.68E-01
ydfM	0.99	9.46E-01	ydhE	0.99	8.68E-01
thiF	0.99	8.11E-01	yqjH	0.99	8.60E-01
glcR	0.99	8.97E-01	yveF	0.99	8.48E-01
yfmP	0.99	8.90E-01	yxdL	0.99	9.15E-01
spoIIIAC	0.99	8.92E-01	aapA	0.99	8.21E-01
yloU	0.99	8.76E-01	yneI	0.99	8.23E-01
yfnB	0.99	9.21E-01	ykvT	0.99	8.44E-01
yvgZ	0.99	8.42E-01	glnQ	0.99	8.88E-01
yxiO	0.99	9.33E-01	ydhF	0.99	8.39E-01
yhdV	0.99	8.29E-01	yvgS	0.99	8.03E-01
ybgG	0.99	8.99E-01	yneJ	0.99	8.47E-01
yojI	0.99	8.87E-01	yhcT	0.99	8.99E-01
yyaC	0.99	8.83E-01	yokI	0.99	8.07E-01
yqaH	0.99	9.55E-01	yxkA	0.99	8.83E-01
gerE	0.99	8.50E-01	yvfV	0.99	7.44E-01
yitT	0.99	8.96E-01	yqaM	0.99	9.05E-01
ynaI	0.99	9.20E-01	ythB	0.99	8.18E-01
yuxH	0.99	8.60E-01	sqhC	0.99	8.98E-01
accA	0.99	8.59E-01	menC	0.99	7.90E-01
rrn	0.99	8.00E-01	aroH	0.99	7.75E-01
yfkA	0.99	8.77E-01	yvqK	0.99	8.11E-01



spoVAC	0.99	8.14E-01	ykzH	0.98	9.12E-01
yobjB	0.99	9.32E-01	yqjC	0.98	6.78E-01
yxkJ	0.99	7.95E-01	yloV	0.98	7.66E-01
yngC	0.99	7.71E-01	lonB	0.98	7.37E-01
ytxM	0.99	7.82E-01	accD	0.98	7.05E-01
pucR	0.99	8.11E-01	ypuI	0.98	7.60E-01
yosT	0.99	9.15E-01	ydcD	0.98	6.19E-01
yqeZ	0.99	7.73E-01	ypmB	0.98	5.82E-01
yycC	0.99	8.21E-01	gtaB	0.98	6.94E-01
yfkB	0.99	7.83E-01	spoIIIAH	0.98	6.78E-01
nasE	0.99	9.04E-01	ykoI	0.98	7.85E-01
cspR	0.99	7.72E-01	yczI	0.98	7.12E-01
ybaN	0.99	9.55E-01	panD	0.98	7.40E-01
csn	0.99	7.31E-01	yunG	0.98	8.67E-01
recQ	0.99	8.15E-01	yopC	0.98	8.06E-01
yqbA	0.99	7.40E-01	ysdA	0.98	7.63E-01
yorP	0.99	8.80E-01	yobL	0.98	5.66E-01
yvbA	0.99	8.08E-01	yxxD	0.98	9.05E-01
ytpQ	0.99	6.95E-01	tagD	0.98	7.27E-01
pX	0.99	9.41E-01	deoD	0.98	7.23E-01
yqiH	0.99	8.80E-01	ypbD	0.98	6.92E-01
yfiN	0.99	8.03E-01	ytmP	0.98	7.01E-01
ykuV	0.99	7.89E-01	degR	0.98	7.34E-01
tuaD	0.99	8.89E-01	mleN	0.98	8.51E-01
ywhD	0.99	7.84E-01	yabD	0.98	7.75E-01
yfmQ	0.99	7.93E-01	ykwC	0.98	7.89E-01
rsiX	0.99	7.93E-01	yycF	0.98	7.64E-01
ywcB	0.99	7.77E-01	yrhL	0.98	8.59E-01
ylbM	0.99	8.11E-01	yhjE	0.98	5.93E-01
xlyA	0.99	7.89E-01	hepS	0.98	6.59E-01
kamA	0.99	8.56E-01	yqaP	0.98	9.43E-01
yirY	0.99	7.58E-01	ycgN	0.98	7.25E-01
yjbL	0.99	7.12E-01	ykqA	0.98	6.58E-01
alkA	0.99	8.71E-01	yjbF	0.98	6.85E-01
yvlD	0.99	8.30E-01	ywmD	0.98	6.13E-01
yveB	0.99	8.88E-01	brnQ	0.98	8.01E-01
yeeI	0.99	7.67E-01	yqbM	0.98	7.94E-01
ycsE	0.99	7.83E-01	yqxG	0.98	7.35E-01
yqeN	0.99	7.98E-01	ylaJ	0.98	7.51E-01
ygaE	0.99	7.65E-01	yrzE	0.98	5.32E-01
ydgI	0.99	8.33E-01	yqbK	0.98	7.15E-01
yqzE	0.99	8.94E-01	rapC	0.98	6.62E-01
araL	0.99	7.33E-01	yrhP	0.98	6.61E-01
yfp	0.99	8.65E-01	spoVAB	0.98	8.63E-01
ydcR	0.99	8.75E-01	yvaF	0.98	6.94E-01
comK	0.99	7.06E-01	yjdJ	0.98	9.05E-01
tepA	0.99	7.02E-01	yhfs	0.98	5.72E-01
ywfI	0.99	7.75E-01	yveG	0.98	6.52E-01
miaA	0.98	7.52E-01	yndE	0.98	8.93E-01
ytsC	0.98	7.99E-01	dnaB	0.98	6.50E-01
yosQ	0.98	8.92E-01	yvfC	0.98	6.35E-01
yknX	0.98	6.59E-01	ytjA	0.98	6.88E-01
ymaF	0.98	7.13E-01	yfhO	0.98	6.87E-01
tagB	0.98	8.17E-01	ywqD	0.98	7.77E-01
spo0M	0.98	7.93E-01	yvdB	0.98	8.67E-01
ywhE	0.98	7.20E-01	yybJ	0.98	9.24E-01
yomE	0.98	8.78E-01	yyaQ	0.98	9.33E-01

yvbX	0.98	6.61E-01	yngF	0.97	6.02E-01
yhdP	0.98	4.93E-01	yflL	0.97	6.32E-01
ywbO	0.98	8.05E-01	yfiJ	0.97	5.91E-01
rapD	0.98	7.33E-01	yoeD	0.97	8.53E-01
ypqA	0.98	7.38E-01	motB	0.97	5.82E-01
ycgG	0.98	6.72E-01	bltD	0.97	8.74E-01
ecsB	0.98	7.74E-01	ypoC	0.97	5.71E-01
carB	0.98	8.30E-01	ycbN	0.97	6.41E-01
yerQ	0.98	6.07E-01	yoaZ	0.97	6.42E-01
nrqA	0.98	6.82E-01	yueF	0.97	5.98E-01
ileS	0.98	4.14E-01	rpoA	0.97	2.69E-01
pucB	0.98	4.68E-01	yrvC	0.97	4.19E-01
ylxX	0.98	5.94E-01	spmB	0.97	4.90E-01
yorM	0.98	4.76E-01	murF	0.97	6.07E-01
greA	0.98	5.70E-01	yjbN	0.97	5.19E-01
ywkD	0.98	6.75E-01	fdhD	0.97	6.47E-01
yobH	0.98	8.18E-01	ymcC	0.97	6.12E-01
spsL	0.98	7.29E-01	yvfi	0.97	6.08E-01
gapA	0.98	5.97E-01	ykoX	0.97	5.32E-01
comGA	0.98	8.18E-01	ywpD	0.97	6.92E-01
motA	0.98	5.46E-01	yndM	0.97	6.44E-01
yjbO	0.98	6.34E-01	lytC	0.97	5.16E-01
ydzA	0.98	7.60E-01	yhjP	0.97	5.19E-01
thyB	0.98	7.32E-01	ypbE	0.97	6.02E-01
yqaG	0.98	5.83E-01	comEB	0.97	7.16E-01
folB	0.98	5.74E-01	sipV	0.97	6.05E-01
icd	0.98	5.31E-01	yoqZ	0.97	5.94E-01
ykpB	0.98	5.54E-01	yczF	0.97	6.25E-01
ydjN	0.98	8.83E-01	pbuG	0.97	6.22E-01
ydcA	0.98	4.76E-01	ymzA	0.97	5.37E-01
yqfQ	0.98	7.69E-01	fliM	0.97	5.07E-01
dck	0.98	5.36E-01	ywoA	0.97	7.30E-01
yhgD	0.98	7.31E-01	ytxB	0.97	4.23E-01
yndJ	0.98	6.48E-01	yhfK	0.97	6.27E-01
albA	0.98	6.84E-01	yxeH	0.97	6.57E-01
yoqG	0.98	6.03E-01	yqeD	0.97	7.55E-01
yhcF	0.98	4.90E-01	ycgI	0.97	6.06E-01
mtrB	0.98	5.18E-01	ytcI	0.97	4.77E-01
galK	0.98	8.13E-01	araB	0.97	5.15E-01
yvaP	0.98	6.69E-01	dapB	0.97	5.09E-01
xkdW	0.98	6.53E-01	yycD	0.97	4.63E-01
yvcN	0.98	5.85E-01	yosM	0.97	6.38E-01
yunC	0.98	6.91E-01	yknV	0.97	5.81E-01
araP	0.98	6.45E-01	uxuA	0.97	3.85E-01
ycgB	0.98	7.17E-01	yoaT	0.97	4.71E-01
fruR	0.98	5.65E-01	proG	0.97	6.94E-01
pstA	0.98	7.94E-01	yqcK	0.97	5.45E-01
ypjG	0.98	6.72E-01	yclK	0.97	3.27E-01
yunA	0.97	7.41E-01	yviE	0.97	4.44E-01
yorW	0.97	7.01E-01	yabR	0.97	6.45E-01
yfiW	0.97	5.36E-01	yugO	0.97	6.27E-01
yflP	0.97	5.99E-01	aldY	0.97	4.86E-01
ydgD	0.97	7.11E-01	yvaZ	0.97	4.16E-01
uxaB	0.97	8.27E-01	ylbL	0.97	5.49E-01
spoIIIAF	0.97	5.85E-01	nin	0.97	8.33E-01
ywhB	0.97	6.81E-01	yabK	0.97	6.50E-01
ykuA	0.97	8.10E-01	rocE	0.97	5.14E-01

ysgA	0.97	3.97E-01	yuzG	0.96	5.67E-01
yecA	0.97	5.27E-01	yycJ	0.96	6.97E-01
yerO	0.97	5.52E-01	yeeG	0.96	6.25E-01
yjdF	0.97	3.96E-01	yjaV	0.96	4.76E-01
ykrB	0.97	4.73E-01	ykzC	0.96	5.59E-01
murAB	0.97	5.44E-01	ykvQ	0.96	4.64E-01
ftsE	0.97	6.04E-01	yndL	0.96	5.91E-01
yqhY	0.97	4.75E-01	yxef	0.96	4.18E-01
tagG	0.97	4.58E-01	yodA	0.96	7.26E-01
ywkC	0.97	5.82E-01	yvkA	0.96	5.99E-01
yrvI	0.97	4.50E-01	yqgS	0.96	4.56E-01
ylbP	0.97	4.71E-01	yorI	0.96	6.00E-01
yisZ	0.97	8.19E-01	ygaO	0.96	6.70E-01
yqjE	0.97	3.90E-01	yhjD	0.96	5.77E-01
yefA	0.97	5.22E-01	yoqR	0.96	5.46E-01
mutSB	0.97	5.24E-01	ywfl	0.96	5.33E-01
yuaC	0.97	5.28E-01	yhjH	0.96	6.63E-01
yitV	0.97	5.66E-01	ylqB	0.96	4.91E-01
cotC	0.97	8.80E-01	yngB	0.96	5.27E-01
prfA	0.97	5.64E-01	asd	0.96	3.97E-01
yybR	0.97	6.27E-01	leuS	0.96	5.49E-01
cotP	0.97	5.64E-01	recU	0.96	4.92E-01
yocL	0.97	4.61E-01	yeeF	0.96	4.60E-01
yvcI	0.97	4.56E-01	yocR	0.96	5.02E-01
yscB	0.97	4.32E-01	yvbG	0.96	3.54E-01
yrdd	0.97	4.99E-01	ydjI	0.96	5.18E-01
yacB	0.97	5.13E-01	ylpC	0.96	5.71E-01
yycI	0.97	4.80E-01	oppF	0.96	2.79E-01
fer	0.97	6.71E-01	yhaP	0.96	6.57E-01
yorH	0.97	5.54E-01	obg	0.96	4.72E-01
yoqD	0.97	5.28E-01	secG	0.96	4.00E-01
spoIVCA	0.97	4.08E-01	wprA	0.96	2.39E-01
csfB	0.97	4.89E-01	yqjD	0.96	3.10E-01
yvfL	0.97	7.13E-01	fliQ	0.96	4.56E-01
cfp	0.97	7.93E-01	yqaL	0.96	7.10E-01
yukF	0.97	4.13E-01	ribC	0.96	3.67E-01
nhaC	0.97	4.21E-01	yvdK	0.96	5.53E-01
yfiZ	0.97	5.55E-01	yabJ	0.96	5.08E-01
ydeQ	0.97	7.14E-01	nadE	0.96	3.62E-01
arfM	0.97	4.95E-01	gltX	0.96	2.90E-01
ywqJ	0.97	7.76E-01	clpY	0.96	4.12E-01
yvfO	0.97	4.94E-01	ylnE	0.96	4.61E-01
yacA	0.97	4.50E-01	ywdL	0.96	6.89E-01
yddG	0.97	6.42E-01	ycdG	0.96	5.36E-01
yqjQ	0.97	3.22E-01	yxjI	0.96	6.61E-01
opuD	0.97	6.86E-01	ytrP	0.96	4.12E-01
yhcC	0.97	4.39E-01	yxaJ	0.96	6.99E-01
yfiI	0.97	5.61E-01	glgA	0.96	2.30E-01
yraA	0.97	5.55E-01	serA	0.96	4.07E-01
yqbI	0.97	5.52E-01	galE	0.96	4.35E-01
ythP	0.97	4.31E-01	ymaB	0.96	4.21E-01
yfiS	0.97	6.40E-01	tkt	0.96	4.26E-01
clpQ	0.97	3.91E-01	lplC	0.96	6.49E-01
yvcR	0.96	4.06E-01	ykuU	0.96	3.75E-01
asnH	0.96	8.11E-01	yjdG	0.96	5.77E-01
yueI	0.96	4.46E-01	ydgK	0.96	4.59E-01
yvdP	0.96	5.57E-01	gcvH	0.96	1.54E-01

tagC	0.96	2.83E-01	yt1I	0.95	6.65E-01
yvmB	0.96	7.71E-01	ydzF	0.95	5.24E-01
yxjO	0.96	2.76E-01	sspC	0.95	7.21E-01
lplA	0.96	7.28E-01	rpsC	0.95	8.44E-02
yybB	0.96	6.26E-01	rpsU	0.95	2.53E-01
yodT	0.96	5.88E-01	acpS	0.95	3.46E-01
racE	0.96	5.49E-01	ytnA	0.95	1.20E-01
ytkK	0.96	3.87E-01	ypuG	0.95	3.27E-01
rok	0.96	3.48E-01	yx1A	0.95	8.51E-01
yhaU	0.96	6.18E-01	tagE	0.95	2.61E-01
yurZ	0.96	3.59E-01	yvgT	0.95	3.15E-01
yabN	0.96	4.89E-01	gyrB	0.95	3.21E-01
ykoT	0.96	2.00E-01	yxxB	0.95	3.10E-01
sigZ	0.96	4.49E-01	yrrK	0.95	2.56E-01
sigY	0.96	6.62E-01	yurQ	0.95	2.10E-01
ylbD	0.96	4.28E-01	yllB	0.95	4.41E-01
ynbA	0.96	4.95E-01	ybgA	0.95	4.05E-01
csd	0.96	1.80E-01	pcrB	0.95	2.97E-01
albD	0.96	5.84E-01	mrpC	0.95	1.99E-01
yj1C	0.96	1.44E-01	malS	0.95	5.58E-01
ysxD	0.96	4.31E-01	yvcQ	0.95	4.11E-01
nifZ	0.96	2.74E-01	yrbG	0.95	3.23E-01
gidA	0.96	3.82E-01	speD	0.95	2.68E-01
ydiR	0.96	8.82E-01	proA	0.95	3.05E-01
ypuH	0.96	3.55E-01	tmk	0.95	2.28E-01
ugtP	0.96	4.72E-01	nprE	0.95	2.81E-01
ykvY	0.96	3.85E-01	ybfG	0.95	2.10E-01
yqaE	0.96	5.67E-01	ydiM	0.95	6.20E-01
yosK	0.96	2.62E-01	lytR	0.95	2.28E-01
ycbU	0.96	4.52E-01	gdh	0.95	6.72E-01
yjiA	0.96	7.22E-01	opuAA	0.95	2.17E-01
moaA	0.96	3.44E-01	yttB	0.95	5.41E-01
ylbE	0.96	4.93E-01	yt1C	0.95	2.54E-01
ccpA	0.96	2.53E-01	gid	0.95	2.01E-01
yobK	0.96	1.25E-01	speA	0.95	1.79E-01
yqxL	0.96	1.24E-01	ytpT	0.95	2.38E-01
yxeg	0.96	2.71E-01	ymfI	0.95	5.76E-01
ykvE	0.96	4.12E-01	yvcT	0.95	2.12E-01
yydI	0.95	7.43E-01	sacX	0.95	7.19E-01
yusG	0.95	2.08E-01	lysA	0.95	4.87E-01
yhaN	0.95	4.02E-01	rplF	0.95	3.47E-02
gmk	0.95	2.73E-01	yveK	0.95	3.52E-01
xkdP	0.95	2.80E-01	yxkC	0.95	1.91E-01
yosF	0.95	6.92E-01	ruvA	0.95	1.09E-01
ywoB	0.95	2.72E-01	yosX	0.95	5.07E-01
yviF	0.95	4.23E-01	yneQ	0.95	1.44E-01
xkdB	0.95	1.99E-01	ypjD	0.95	3.77E-01
truB	0.95	3.09E-01	ydjL	0.95	2.75E-01
ykuD	0.95	4.44E-01	rnhB	0.95	3.91E-01
yprB	0.95	3.18E-01	yteJ	0.95	3.25E-01
yybA	0.95	4.69E-01	topA	0.95	2.72E-01
yvaV	0.95	2.64E-01	cca	0.95	2.58E-01
yyaS	0.95	7.05E-01	ydiB	0.95	3.17E-01
yrhM	0.95	5.39E-01	treR	0.95	2.49E-01
ylbK	0.95	2.74E-01	yopN	0.95	4.64E-01
ctsR	0.95	5.30E-01	yvzB	0.95	1.00E-01
ywqE	0.95	3.10E-01	yesU	0.95	3.31E-01

yngH	0.95	1.62E-01	ykoA	0.94	4.16E-01
fbp	0.95	3.07E-01	ywrK	0.94	5.96E-01
mdr	0.95	2.45E-01	rplX	0.94	9.19E-02
rtp	0.95	4.50E-01	ysxE	0.94	3.14E-01
ylxW	0.95	2.96E-01	yfmL	0.94	2.93E-01
ywdf	0.95	1.86E-01	yhfW	0.94	6.73E-01
yvfD	0.95	1.89E-01	yneB	0.94	4.06E-01
ynzF	0.95	4.05E-01	yobO	0.94	1.74E-01
yrzH	0.95	1.92E-01	yrrC	0.94	2.16E-01
yrdf	0.95	2.52E-01	ydeO	0.94	2.47E-01
yisL	0.95	5.09E-01	ytvI	0.94	5.90E-01
tgl	0.95	6.62E-01	yshC	0.94	1.56E-01
cheY	0.95	2.26E-01	araE	0.94	4.24E-01
spoIVCB	0.95	2.76E-01	yoqX	0.94	1.99E-01
sinR	0.95	5.45E-01	spoVS	0.94	2.82E-01
mtrA	0.95	1.97E-01	ycxA	0.94	4.82E-01
yvmC	0.95	5.45E-01	ykrI	0.94	3.92E-01
cotZ	0.95	1.73E-01	ywzA	0.94	5.19E-01
yvfB	0.95	4.55E-01	nucA	0.94	1.87E-01
yoeA	0.95	1.48E-01	yolC	0.94	4.35E-01
ydaB	0.95	3.62E-01	rocA	0.94	4.19E-01
rplP	0.95	1.33E-01	ydaC	0.94	4.80E-01
spoIIIAB	0.95	3.83E-01	ypmA	0.94	2.63E-01
sboX	0.95	3.48E-01	yktB	0.94	2.25E-01
yhjA	0.95	3.68E-01	phrI	0.94	5.81E-01
ywnH	0.95	3.44E-01	rnr	0.94	1.70E-01
crh	0.95	2.14E-01	yvcJ	0.94	1.95E-01
yvaW	0.95	4.90E-01	ycsK	0.94	4.17E-01
ytoQ	0.95	4.28E-01	ylqF	0.94	2.84E-01
dnaD	0.95	2.41E-01	ywhK	0.94	4.50E-01
yusY	0.95	6.04E-01	pepT	0.94	4.82E-01
spoVT	0.95	4.36E-01	mmr	0.94	4.60E-01
yetO	0.94	4.55E-01	dgkA	0.94	3.29E-01
yesQ	0.94	4.41E-01	ssuB	0.94	4.39E-01
yjqC	0.94	1.29E-01	spoIVFA	0.94	1.63E-01
yrvD	0.94	2.08E-01	atpF	0.94	3.65E-01
ytLP	0.94	4.19E-01	tdk	0.94	3.55E-01
yticJ	0.94	1.95E-01	ybxG	0.94	2.32E-01
pcrA	0.94	1.93E-01	yobF	0.94	4.03E-01
yhaK	0.94	3.92E-01	ysnE	0.94	3.18E-01
yqgU	0.94	1.97E-01	sul	0.94	1.51E-01
gerM	0.94	3.76E-01	yloN	0.94	1.79E-01
yjbV	0.94	8.12E-02	yvkN	0.94	6.18E-01
yvaA	0.94	2.44E-01	sipT	0.94	1.47E-01
ruvB	0.94	1.35E-01	argS	0.94	1.95E-01
sspN	0.94	1.96E-01	ywaC	0.94	2.10E-01
ycxD	0.94	4.54E-01	yrvJ	0.94	1.14E-01
parE	0.94	2.06E-01	yoZC	0.94	5.39E-01
lytB	0.94	4.30E-01	yqfD	0.94	4.57E-01
yrkK	0.94	5.28E-01	ctaO	0.94	3.38E-01
yvsH	0.94	6.34E-01	yhcB	0.94	2.93E-01
ytsJ	0.94	1.60E-01	ywdD	0.94	3.81E-01
yobN	0.94	5.42E-01	yfjN	0.94	1.83E-01
pbpD	0.94	2.09E-01	topB	0.94	1.68E-01
ytrF	0.94	2.81E-01	deaD	0.94	1.84E-01
yraN	0.94	6.38E-02	glnR	0.94	1.24E-01
infA	0.94	5.61E-02	ynzC	0.94	3.92E-01

alsS	0.94	4.04E-01	ykzE	0.93	1.43E-01
mreB	0.94	1.30E-01	yoqJ	0.93	3.85E-01
ydeB	0.94	3.78E-01	yrgG	0.93	9.15E-02
cydA	0.94	5.33E-01	mutT	0.93	4.81E-01
ypeQ	0.94	4.33E-01	yetL	0.93	2.43E-01
yxbF	0.94	4.07E-01	xkdT	0.93	9.73E-02
ydhI	0.94	2.40E-01	rnhC	0.93	3.29E-01
ywdI	0.94	2.87E-01	sacB	0.93	5.59E-01
fold	0.94	2.23E-01	yqfZ	0.93	3.71E-01
yurT	0.94	1.68E-01	def	0.93	1.49E-01
hag	0.93	1.91E-01	yrzI	0.93	1.71E-01
yuxK	0.93	1.83E-01	tlp	0.93	1.03E-01
yngD	0.93	1.35E-01	csbD	0.93	1.88E-01
yrzD	0.93	1.11E-01	yesX	0.93	2.23E-01
ytxE	0.93	3.31E-01	oppB	0.93	8.99E-02
ebrB	0.93	3.79E-01	ypoP	0.93	5.35E-01
yjdI	0.93	4.36E-01	prkA	0.93	4.78E-01
yocC	0.93	3.35E-01	yodQ	0.93	3.04E-01
opuCC	0.93	5.06E-02	yjmC	0.93	1.58E-01
ymfE	0.93	7.28E-01	citR	0.93	2.98E-01
ymaD	0.93	2.66E-01	yvrB	0.93	3.72E-01
aprX	0.93	4.68E-01	yrvM	0.93	1.33E-01
yveP	0.93	4.38E-01	dapG	0.93	1.81E-01
ykmA	0.93	2.65E-01	yvjD	0.93	1.60E-01
rpsM	0.93	1.67E-02	yusW	0.93	2.93E-01
pckA	0.93	1.22E-01	yfjT	0.92	3.49E-01
menH	0.93	1.40E-01	yfmO	0.92	2.06E-01
yjld	0.93	1.19E-01	glnM	0.92	3.49E-01
thyA	0.93	3.23E-01	yvaN	0.92	2.98E-01
yvoD	0.93	2.99E-01	yqeY	0.92	4.27E-02
yodS	0.93	5.74E-01	yoZL	0.92	3.85E-01
yrdC	0.93	2.10E-01	yvrE	0.92	1.99E-01
ylaE	0.93	5.79E-01	ytzA	0.92	7.28E-02
yolB	0.93	3.97E-01	yfmM	0.92	2.60E-01
ybbM	0.93	1.08E-01	adk	0.92	2.06E-03
yclF	0.93	5.42E-01	yvrC	0.92	1.68E-01
ywtF	0.93	3.42E-01	yfnE	0.92	5.37E-01
yyaD	0.93	3.48E-02	parC	0.92	5.98E-02
gerAC	0.93	8.69E-02	yveL	0.92	1.23E-01
ywaE	0.93	9.72E-02	ycnE	0.92	1.13E-01
yvaO	0.93	1.89E-01	ycgL	0.92	3.35E-01
spoVR	0.93	4.35E-01	mntR	0.92	1.75E-01
mdh	0.93	1.39E-01	rplE	0.92	1.07E-02
yvqI	0.93	1.06E-01	kapD	0.92	1.25E-01
rpsL	0.93	5.24E-03	dps	0.92	2.38E-01
yusB	0.93	6.67E-02	spoVD	0.92	3.90E-02
yqzC	0.93	1.78E-01	ythC	0.92	2.27E-01
ydZH	0.93	6.32E-01	atpB	0.92	1.98E-01
ykjA	0.93	3.34E-01	hemE	0.92	1.66E-01
yusP	0.93	1.64E-01	ydaQ	0.92	4.90E-01
narJ	0.93	5.53E-01	yqeU	0.92	8.53E-02
dxs	0.93	1.18E-01	ywfK	0.92	2.62E-01
flhA	0.93	8.71E-02	yetN	0.92	1.50E-01
ydiO	0.93	3.75E-01	ydjH	0.92	3.81E-01
yydD	0.93	1.62E-01	ydbR	0.92	1.81E-02
sinI	0.93	5.89E-01	opuBA	0.92	8.83E-02
pnbA	0.93	2.12E-01	yvbI	0.92	2.59E-01

ywqB	0.92	7.66E-02	yvaM	0.91	2.21E-01
pyrR	0.92	2.42E-01	tuaE	0.91	5.25E-02
tmrB	0.92	4.41E-01	yabC	0.91	1.80E-01
yojF	0.92	7.92E-02	proH	0.91	7.54E-02
mrpA	0.92	2.34E-01	ykvP	0.91	6.54E-01
rpsH	0.92	1.83E-02	yrrI	0.91	2.82E-01
ycnJ	0.92	1.54E-01	yfhQ	0.91	8.91E-02
alr	0.92	7.25E-02	ydcE	0.91	4.89E-02
yvcK	0.92	1.73E-01	yoZQ	0.91	1.75E-01
yngL	0.92	7.22E-01	yusD	0.91	2.94E-02
yvrA	0.92	1.38E-01	rpoB	0.91	1.35E-02
folK	0.92	8.89E-02	yxiC	0.91	6.59E-01
yxxG	0.92	1.63E-01	yjbA	0.91	7.49E-02
moeA	0.92	1.30E-01	rrn	0.91	2.22E-01
aldX	0.92	5.33E-01	pgk	0.91	2.65E-02
ywhH	0.92	3.26E-01	yuaJ	0.91	4.18E-02
rpoE	0.92	1.83E-01	ybgF	0.91	7.83E-02
xkdD	0.92	3.16E-01	gerPC	0.91	3.04E-01
moeB	0.92	9.70E-02	ypmT	0.91	3.04E-01
yvyE	0.92	1.04E-01	rplO	0.91	3.50E-03
yqgN	0.92	1.74E-01	ynzG	0.91	3.31E-02
tpiA	0.92	2.88E-02	rpsQ	0.91	1.15E-03
yxcA	0.92	2.71E-01	ycgP	0.91	3.59E-01
gerPE	0.92	2.29E-01	ycgK	0.91	1.82E-01
recA	0.92	1.44E-01	ylnF	0.91	9.84E-02
yrbD	0.92	5.59E-01	ymcA	0.91	1.74E-01
hemX	0.92	1.70E-01	wapA	0.91	1.57E-01
yjfc	0.92	3.01E-01	yhcI	0.91	5.62E-02
ytpS	0.92	1.27E-01	ybxF	0.91	8.60E-03
ywqH	0.92	4.25E-01	ycgR	0.91	9.08E-02
yqkE	0.92	4.29E-01	ynaC	0.91	1.75E-01
yhcP	0.92	4.69E-01	ywmA	0.91	4.31E-01
yvkC	0.92	3.79E-01	ynzB	0.91	5.63E-01
ipi	0.92	1.10E-01	bofC	0.91	7.45E-02
ywoC	0.92	6.57E-02	ytxD	0.91	1.71E-02
divIB	0.92	1.21E-01	spoIVFB	0.91	1.07E-01
yvgN	0.92	5.39E-02	yotL	0.91	6.01E-01
ywqM	0.92	6.24E-01	ywqN	0.91	3.35E-01
hemH	0.92	5.19E-02	yvcD	0.91	5.26E-02
ytbJ	0.92	5.31E-02	ylbH	0.91	1.07E-01
yydC	0.92	3.54E-01	ptsH	0.91	7.47E-02
codV	0.92	6.48E-02	ftsL	0.91	4.08E-02
bofA	0.92	1.11E-01	rplN	0.91	3.63E-03
ywkF	0.92	1.13E-01	pucL	0.91	1.82E-01
yueG	0.92	4.20E-02	sspB	0.91	7.82E-02
sdaAA	0.92	1.49E-01	yycP	0.91	3.97E-01
ytdD	0.92	1.45E-01	ywqF	0.91	1.40E-01
ykvS	0.92	2.76E-01	yvbF	0.91	3.70E-02
rsfA	0.92	2.63E-01	yrzK	0.91	2.19E-01
spoIIM	0.92	2.64E-01	xkdQ	0.91	2.05E-01
spoIIIAD	0.92	7.21E-02	yrhB	0.91	1.28E-01
rplR	0.92	2.35E-03	ylqD	0.91	1.55E-01
yveS	0.91	2.20E-01	ydbJ	0.91	6.19E-02
yteR	0.91	8.16E-02	ydcC	0.91	3.09E-01
ywiE	0.91	3.25E-01	nasF	0.91	5.43E-01
mrpB	0.91	7.15E-02	ywdE	0.91	1.52E-01
yorZ	0.91	3.32E-01	fusA	0.91	2.63E-03

ytiA	0.91	1.69E-02	yhaQ	0.90	3.61E-02
natA	0.91	5.52E-02	ywfO	0.90	4.32E-02
ytrE	0.91	8.18E-02	yoqC	0.90	6.79E-02
yopL	0.91	5.05E-02	albC	0.90	3.03E-01
ytpR	0.91	2.99E-02	yneK	0.90	1.26E-01
yufK	0.91	2.81E-02	yx1J	0.90	4.40E-01
yorL	0.91	1.44E-01	asnO	0.90	1.83E-01
bglS	0.91	2.74E-01	yhaZ	0.90	2.73E-01
pbpB	0.90	4.02E-02	ybgJ	0.90	5.04E-01
yvcE	0.90	2.53E-02	yloQ	0.90	2.26E-02
fabG	0.90	1.42E-01	rpmC	0.90	5.95E-03
ywLD	0.90	1.70E-01	yhdL	0.90	3.86E-02
cmk	0.90	1.61E-02	alaS	0.90	4.02E-02
ytmQ	0.90	6.01E-02	yceK	0.90	1.50E-01
ywoD	0.90	5.72E-02	lrpB	0.90	4.16E-01
yvqJ	0.90	3.63E-01	pbpC	0.90	2.35E-02
yhzA	0.90	1.94E-01	ydfI	0.90	1.45E-01
eno	0.90	4.11E-02	yrkA	0.90	6.11E-01
tuaH	0.90	1.89E-02	gbsA	0.90	1.38E-01
nth	0.90	3.66E-02	rplK	0.89	1.56E-03
ykpA	0.90	9.20E-03	yyaA	0.89	3.19E-01
yojG	0.90	4.60E-02	pgsA	0.89	5.43E-02
ypbF	0.90	7.43E-02	yflE	0.89	2.64E-02
arsR	0.90	4.29E-01	hemD	0.89	3.57E-02
yosS	0.90	4.51E-01	opuBC	0.89	1.64E-02
ynzD	0.90	1.29E-01	ytqA	0.89	3.10E-02
ftsW	0.90	2.33E-01	yflG	0.89	4.30E-02
yvaK	0.90	4.47E-02	flhB	0.89	4.42E-02
yflI	0.90	6.99E-02	hemC	0.89	6.71E-02
ybbU	0.90	1.78E-01	alaT	0.89	1.52E-02
gntP	0.90	9.01E-02	ywoG	0.89	6.62E-01
ptsG	0.90	1.65E-01	yqzD	0.89	5.24E-02
ybbR	0.90	1.15E-02	hemL	0.89	3.00E-02
yceB	0.90	7.10E-02	yhdA	0.89	4.41E-01
pstBA	0.90	6.84E-02	secA	0.89	1.72E-02
yrhJ	0.90	3.01E-01	ywjE	0.89	1.95E-01
yjdA	0.90	1.07E-01	dapF	0.89	4.11E-01
yodF	0.90	3.42E-02	trkA	0.89	5.38E-01
yx1F	0.90	2.35E-01	yopJ	0.89	8.95E-02
yqgT	0.90	3.18E-02	ykvL	0.89	4.15E-02
comZ	0.90	4.62E-02	ycbG	0.89	3.78E-01
yybD	0.90	2.25E-01	ligA	0.89	3.96E-02
yflB	0.90	3.32E-01	yfhA	0.89	1.11E-01
ykpC	0.90	3.27E-02	tyrS	0.89	2.07E-02
mreBH	0.90	6.98E-02	mfd	0.89	5.61E-02
asnS	0.90	1.80E-02	yybT	0.89	1.18E-02
ung	0.90	1.69E-01	yrzB	0.89	5.85E-02
rocF	0.90	2.75E-02	ctaA	0.89	2.51E-02
yjmB	0.90	1.07E-01	yvrG	0.89	9.75E-03
ylqH	0.90	1.54E-01	ywiB	0.89	9.49E-02
trpS	0.90	1.53E-02	ywkE	0.89	9.84E-02
ydfR	0.90	4.94E-01	yqeB	0.89	2.59E-02
yloI	0.90	1.04E-01	yfiX	0.89	1.65E-01
yqjA	0.90	3.49E-02	yhfJ	0.89	2.07E-02
hxlA	0.90	8.62E-02	ggaB	0.89	8.03E-02
uppS	0.90	1.08E-02	yneN	0.89	4.85E-02
yxdK	0.90	6.09E-02	yxaF	0.89	9.17E-02



ywrD	0.89	2.68E-01	yrkP	0.88	3.34E-01
nusB	0.89	1.08E-01	ykuG	0.88	3.19E-01
yunB	0.89	2.30E-01	yjzD	0.88	2.38E-01
bglA	0.89	1.69E-01	yjcB	0.88	3.97E-01
bmrU	0.89	1.84E-01	ycdH	0.88	3.84E-03
ydiN	0.89	3.03E-01	argF	0.88	3.58E-01
yjdH	0.88	5.81E-01	yhdC	0.88	1.10E-01
yuzE	0.88	5.16E-01	codY	0.88	4.18E-03
sigW	0.88	4.16E-03	ymfH	0.88	1.05E-01
yxiH	0.88	1.32E-01	yqjM	0.88	3.71E-01
ydfA	0.88	1.00E-01	ysdC	0.88	2.34E-02
yndK	0.88	1.01E-01	purT	0.88	8.80E-03
sppA	0.88	4.43E-02	yqjW	0.87	4.77E-01
murB	0.88	2.32E-02	spoIIIAE	0.87	3.10E-02
cspC	0.88	6.94E-02	ykvJ	0.87	1.10E-01
appA	0.88	2.60E-02	ylxA	0.87	5.08E-03
yclN	0.88	7.64E-03	ylbC	0.87	7.30E-02
yvcC	0.88	1.46E-02	med	0.87	9.36E-03
yrkF	0.88	4.25E-01	yrrB	0.87	7.47E-02
ybbT	0.88	1.09E-02	yxbA	0.87	5.09E-01
ylyB	0.88	2.06E-03	clpP	0.87	2.20E-02
dxr	0.88	4.83E-03	yxaL	0.87	1.97E-01
yabQ	0.88	1.40E-01	yvgJ	0.87	3.24E-01
dgk	0.88	7.88E-02	yxkI	0.87	1.96E-01
yqaO	0.88	5.12E-01	albB	0.87	5.47E-02
rpIS	0.88	1.17E-03	ykoU	0.87	3.78E-02
yqiW	0.88	5.48E-02	panC	0.87	2.75E-03
ypjH	0.88	2.08E-02	ydaO	0.87	5.22E-02
ymfA	0.88	1.45E-02	yubF	0.87	5.37E-03
spoIID	0.88	5.11E-01	tuaC	0.87	4.88E-01
cssS	0.88	1.02E-01	yclQ	0.87	2.50E-02
ylaF	0.88	1.52E-01	cotM	0.87	3.54E-01
sspI	0.88	1.06E-01	cheA	0.87	2.51E-02
ymxH	0.88	3.54E-01	yhgE	0.87	1.27E-01
yxdM	0.88	2.01E-02	ywdK	0.87	4.44E-01
clpX	0.88	5.63E-03	ywfG	0.87	2.84E-02
ybfI	0.88	1.24E-02	yrkQ	0.87	6.11E-02
lytT	0.88	1.28E-02	ypkP	0.87	2.94E-02
ywpB	0.88	7.58E-02	ykoV	0.87	9.36E-02
yneA	0.88	1.58E-01	radC	0.87	3.32E-03
yozF	0.88	3.55E-01	ezrA	0.87	1.63E-03
gatC	0.88	4.73E-03	yrvO	0.87	8.85E-03
yqkK	0.88	1.48E-01	yodM	0.87	7.66E-02
mbI	0.88	2.86E-02	fabF	0.87	2.08E-02
oxdC	0.88	8.18E-02	xkdH	0.87	2.57E-02
gerPF	0.88	2.43E-01	yjbQ	0.87	7.74E-02
katX	0.88	1.71E-02	pgm	0.87	1.40E-03
yuaE	0.88	5.98E-02	gcp	0.87	8.67E-03
pyrP	0.88	1.03E-02	abh	0.87	4.17E-02
rnpA	0.88	5.26E-02	ypsB	0.87	2.66E-02
cah	0.88	9.83E-02	phoB	0.87	1.56E-02
yokF	0.88	2.49E-02	aspB	0.87	4.40E-03
yqeW	0.88	1.21E-01	recF	0.87	2.40E-03
ywzC	0.88	8.54E-03	yrhF	0.87	8.13E-02
ykzI	0.88	3.56E-03	ftsX	0.87	9.05E-02
fabHA	0.88	5.98E-02	phoD	0.87	2.36E-01
ywnB	0.88	1.76E-02	dinB	0.87	6.11E-02

yuaB	0.87	3.07E-01	ykuC	0.86	2.31E-02
lepA	0.87	2.12E-02	yobD	0.86	4.87E-03
mobA	0.87	5.32E-02	cccB	0.86	7.12E-02
yxiL	0.87	8.64E-02	yaaB	0.86	1.39E-03
ydbI	0.87	9.28E-02	ynaF	0.86	1.77E-01
yplP	0.87	1.84E-01	yluC	0.86	7.05E-03
yusO	0.87	1.12E-03	yyaF	0.85	3.34E-02
gpsA	0.87	2.55E-03	yoeC	0.85	2.59E-02
atpE	0.87	2.62E-02	ytzF	0.85	1.72E-02
ymdA	0.87	1.16E-02	yvdO	0.85	1.87E-01
yybF	0.87	1.18E-01	fruK	0.85	2.45E-03
yjbE	0.87	1.52E-01	lspA	0.85	1.77E-02
yxiS	0.87	2.14E-01	yabB	0.85	6.19E-03
ylqG	0.87	2.00E-03	ebrA	0.85	2.42E-02
coxA	0.87	2.81E-02	yrbF	0.85	1.51E-02
licH	0.87	2.22E-01	ywnC	0.85	9.15E-03
menA	0.87	1.74E-02	uvrX	0.85	4.54E-01
gidB	0.87	1.06E-02	sigM	0.85	1.30E-02
ybfH	0.87	6.98E-02	yybG	0.85	1.68E-02
gatB	0.87	6.68E-03	araR	0.85	4.42E-02
paiA	0.87	4.18E-01	ytfJ	0.85	4.21E-01
azlD	0.87	5.43E-03	yvrN	0.85	2.36E-02
yloH	0.86	7.59E-03	oppA	0.85	2.77E-03
flhF	0.86	1.64E-02	glyS	0.85	6.53E-03
yomX	0.86	2.60E-02	awlC	0.85	3.12E-03
psd	0.86	5.69E-03	yvdT	0.85	1.47E-01
yubE	0.86	1.36E-01	minC	0.85	1.61E-03
yjpA	0.86	2.17E-01	sigD	0.85	2.51E-02
hprP	0.86	2.79E-02	yodJ	0.85	2.89E-02
yvrD	0.86	5.54E-02	yitY	0.85	1.07E-02
yqfR	0.86	2.28E-03	yshE	0.85	1.07E-01
ftsH	0.86	1.35E-01	lexA	0.85	7.67E-03
yoqU	0.86	7.60E-02	gcaD	0.85	3.89E-02
rplI	0.86	1.01E-03	ywbA	0.85	5.02E-01
ymaI	0.86	6.79E-03	yclO	0.85	1.54E-03
yazB	0.86	3.40E-03	yyaO	0.85	2.26E-01
splA	0.86	3.31E-02	rho	0.85	1.12E-02
spoVAD	0.86	3.57E-01	valS	0.84	3.69E-03
ylbI	0.86	4.58E-02	yshA	0.84	6.38E-03
secDF	0.86	1.91E-03	mlpA	0.84	3.62E-03
aroD	0.86	1.10E-03	fbaA	0.84	2.71E-03
atpH	0.86	3.31E-02	ykoK	0.84	1.07E-03
yuaA	0.86	8.79E-02	nudF	0.84	6.93E-02
guaC	0.86	3.92E-01	atpG	0.84	6.96E-03
ylxH	0.86	1.51E-02	rplM	0.84	2.07E-02
yczA	0.86	1.04E-01	yokA	0.84	3.28E-01
ykrK	0.86	4.77E-02	cotB	0.84	2.96E-01
ycgS	0.86	4.71E-03	ypzD	0.84	3.73E-01
rrn	0.86	1.32E-03	yerH	0.84	1.62E-03
ywtB	0.86	3.24E-01	pfkA	0.84	1.19E-03
ywfM	0.86	2.38E-02	ywoH	0.84	9.96E-03
yfkC	0.86	3.14E-02	ywnE	0.84	6.06E-02
azlB	0.86	4.97E-02	yheA	0.84	2.10E-03
ywqK	0.86	2.91E-02	yusX	0.84	2.23E-03
hrcA	0.86	3.41E-03	yvpA	0.84	1.12E-02
yvbH	0.86	2.27E-02	fruA	0.84	3.44E-03
ycnI	0.86	3.28E-02	spoIIB	0.84	2.05E-01

purR	0.84	3.14E-02	yphP	0.82	2.79E-03
yhdH	0.84	3.37E-02	oppD	0.82	1.51E-03
hemB	0.84	3.24E-03	ykoB	0.82	7.11E-03
yfjO	0.84	9.55E-03	yhcK	0.82	4.37E-03
ywjF	0.84	2.29E-02	thdF	0.82	2.60E-02
yeeA	0.84	2.39E-01	pbpX	0.82	6.77E-02
ywnA	0.84	8.66E-03	ytxK	0.82	7.60E-03
ytrD	0.84	1.10E-02	yxjL	0.82	5.52E-02
yvoF	0.84	6.33E-02	cinA	0.82	3.14E-03
bdbB	0.84	2.09E-01	yomZ	0.82	3.74E-02
comX	0.84	2.20E-01	mrpF	0.82	3.07E-02
aspS	0.84	5.00E-03	yezC	0.82	1.35E-02
ycnK	0.84	7.91E-03	rocB	0.82	6.49E-03
yloM	0.84	8.32E-03	yopM	0.82	1.54E-01
yazA	0.84	8.73E-03	yhcQ	0.82	4.51E-01
hepT	0.84	3.38E-03	katE	0.82	3.90E-01
yhcE	0.84	2.86E-02	yacC	0.82	1.45E-02
yqeG	0.84	2.44E-03	cotT	0.82	1.24E-01
yqeH	0.84	1.83E-03	prfB	0.82	1.77E-03
yogA	0.84	7.30E-02	yvbU	0.82	3.01E-01
ycbB	0.84	1.85E-01	cheW	0.82	5.70E-03
ywrA	0.84	2.66E-01	hxlB	0.82	1.17E-02
yusR	0.83	3.05E-01	yybH	0.82	6.62E-02
yndG	0.83	7.75E-02	yvyH	0.82	3.89E-03
yopI	0.83	8.78E-02	purQ	0.82	1.50E-02
ypzC	0.83	3.18E-01	ykrM	0.82	2.15E-02
yqeK	0.83	1.30E-01	braB	0.82	2.86E-03
yolA	0.83	2.42E-01	yutK	0.82	5.77E-03
yosP	0.83	2.13E-01	yyaL	0.82	3.61E-01
yomN	0.83	3.77E-02	sspJ	0.82	3.48E-01
yteQ	0.83	4.28E-02	yjcK	0.82	4.81E-02
yphC	0.83	1.36E-03	yjcS	0.82	6.90E-03
xkdM	0.83	1.17E-02	yopK	0.82	9.45E-02
prkC	0.83	1.18E-03	ykoL	0.82	1.62E-01
ybdG	0.83	8.69E-03	yvdR	0.82	5.38E-01
yhcA	0.83	1.63E-02	argD	0.81	7.79E-03
yurU	0.83	5.32E-03	yuzB	0.81	1.46E-01
yplQ	0.83	1.08E-01	cheD	0.81	1.71E-03
ywmB	0.83	4.58E-03	maf	0.81	1.80E-03
ponA	0.83	4.64E-03	yqaT	0.81	4.57E-01
yxkH	0.83	9.28E-02	yqgO	0.81	1.86E-02
yutJ	0.83	3.64E-03	yycS	0.81	1.36E-02
ansR	0.83	2.23E-01	yvdI	0.81	6.66E-03
yqeL	0.83	4.68E-03	atpA	0.81	2.59E-03
upp	0.83	7.00E-02	ytcP	0.81	1.06E-01
dnaA	0.83	5.24E-03	prpC	0.81	5.25E-03
cheB	0.83	1.01E-02	dapA	0.81	1.22E-03
yebG	0.83	1.26E-01	yhcH	0.81	1.18E-03
yvkB	0.83	2.04E-01	ymdB	0.81	6.23E-03
yndH	0.83	4.15E-02	yraG	0.81	3.77E-01
yheC	0.83	8.39E-02	yhbJ	0.81	1.33E-02
cotF	0.83	1.26E-02	opuE	0.81	1.35E-03
priA	0.83	1.92E-03	yerP	0.80	1.66E-03
ymzC	0.83	2.43E-02	yppG	0.80	1.98E-01
sspA	0.83	8.62E-03	ylaH	0.80	5.48E-03
patB	0.83	3.75E-03	ywnG	0.80	4.20E-03
tasA	0.82	2.62E-01	hemZ	0.80	1.27E-02

yebA	0.80	3.30E-03	yjeA	0.76	7.21E-03
glnH	0.80	1.06E-01	arsB	0.76	1.91E-02
yfnA	0.80	9.04E-03	ybaF	0.76	1.23E-03
purB	0.80	1.07E-03	purL	0.76	1.00E-03
ydfE	0.80	3.42E-01	proJ	0.76	4.68E-03
yopV	0.80	1.84E-01	qoxC	0.76	1.35E-03
xkdR	0.80	2.57E-02	yomT	0.76	4.10E-03
bhlA	0.80	3.32E-01	yeeK	0.76	1.65E-01
yllA	0.80	2.11E-03	yonD	0.76	4.81E-03
mobB	0.80	1.74E-03	yhcG	0.76	3.09E-02
yurS	0.80	2.19E-02	yopS	0.76	8.19E-02
cheC	0.80	2.74E-03	ytqB	0.76	1.36E-03
mutL	0.80	6.63E-03	qoxA	0.76	5.00E-03
yuiC	0.80	2.20E-03	exoA	0.75	1.50E-01
cotG	0.80	2.60E-01	cydD	0.75	1.90E-01
yxzC	0.80	2.22E-02	ybdA	0.75	2.18E-03
ypiP	0.79	2.51E-02	yveO	0.75	6.58E-03
ykoW	0.79	1.94E-03	purE	0.75	1.49E-03
ynaE	0.79	3.12E-01	yonN	0.75	6.49E-03
atpD	0.79	1.17E-03	ywaF	0.75	2.30E-01
yrrO	0.79	2.85E-03	yqiY	0.75	2.42E-03
ytwI	0.79	1.27E-02	yfhI	0.75	3.02E-02
yosN	0.79	4.46E-02	phoA	0.75	2.19E-01
ksgA	0.79	6.38E-02	ywlA	0.75	2.91E-02
xkdU	0.79	1.17E-02	moaB	0.75	8.06E-03
yckJ	0.79	5.15E-03	yxzG	0.74	1.26E-03
yvbV	0.79	6.98E-03	yqgX	0.74	1.00E-02
yloS	0.79	1.13E-03	yqjF	0.74	1.91E-01
polC	0.79	2.65E-03	yust	0.74	1.99E-01
spoVFB	0.79	4.18E-02	mutS	0.74	1.68E-03
yckI	0.79	2.75E-03	yoqN	0.74	2.18E-02
arsC	0.79	9.94E-02	ywrC	0.74	2.23E-01
yotE	0.79	1.41E-02	ycnD	0.74	1.15E-03
ywzB	0.79	1.10E-03	yxaD	0.74	1.89E-01
yosR	0.79	2.07E-01	yqeT	0.73	3.07E-03
purC	0.79	3.22E-03	ydeD	0.73	2.79E-01
ylaK	0.78	1.11E-02	pbuX	0.73	4.78E-03
rnc	0.78	2.13E-03	argG	0.73	3.36E-03
smc	0.78	2.01E-03	yxii	0.73	1.68E-03
yhbI	0.78	1.59E-02	yebE	0.73	5.87E-02
pyrG	0.78	1.41E-03	yyaN	0.73	1.50E-01
yxjF	0.78	2.95E-01	yncB	0.73	1.22E-02
ykrL	0.78	3.55E-03	ybcC	0.72	1.64E-03
yfhS	0.77	1.64E-01	ykvM	0.72	1.27E-03
yulC	0.77	1.51E-01	ywlE	0.72	8.61E-02
hemN	0.77	1.24E-03	yptA	0.72	1.67E-03
yotM	0.77	1.36E-01	yczE	0.72	2.34E-02
yoqA	0.77	3.06E-02	aroE	0.71	1.05E-03
yvfG	0.77	3.07E-03	yonE	0.71	2.03E-02
carA	0.77	4.43E-03	yclA	0.71	1.08E-01
yfjS	0.77	1.37E-01	gltC	0.71	4.14E-03
yosV	0.77	3.94E-01	yxig	0.71	2.84E-03
yveN	0.77	2.02E-02	yvfa	0.71	1.20E-02
fmt	0.76	1.20E-02	ywrJ	0.71	3.66E-03
yveR	0.76	6.30E-02	ykvN	0.71	1.20E-01
comGF	0.76	1.66E-01	yxld	0.71	2.20E-02
yabE	0.76	1.05E-02	gerAB	0.71	2.83E-01

xkdX	0.71	6.19E-03
yycQ	0.70	2.60E-01
gerPD	0.70	1.32E-01
yubC	0.69	8.32E-02
yodP	0.69	4.50E-02
yetM	0.69	8.24E-03
yqiD	0.69	1.61E-02
cwlD	0.69	3.96E-03
sacY	0.69	1.98E-01
albF	0.69	1.00E-01
pta	0.69	2.14E-03
yotH	0.68	2.19E-01
yodH	0.68	1.44E-01
ydeR	0.67	2.49E-01
yotC	0.67	2.65E-02
yfmN	0.67	1.37E-01
yokD	0.66	1.57E-01
ywjC	0.64	3.39E-02
rpsT	0.64	4.57E-03
ywpE	0.64	1.46E-02
yojE	0.63	9.74E-02
lmrB	0.63	2.03E-02
blyA	0.63	1.79E-03
yonF	0.62	1.11E-01
yvzC	0.62	1.31E-01
yomD	0.62	2.33E-02
ybcH	0.62	1.12E-03
yveQ	0.61	1.30E-02
yopX	0.61	2.01E-01
gerBA	0.59	1.20E-02
yhfM	0.57	3.77E-02
ytzG	0.57	3.28E-02
scoB	0.56	3.61E-01
ywrB	0.56	8.05E-03
yhdK	0.56	1.11E-02
yvrL	0.55	6.09E-02
ybaC	0.55	2.21E-02
ybcO	0.48	6.50E-02