

# Identification of juvenility-associated genes in the mouse hepatocytes and cardiomyocytes.

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## Supplementary Information

### Identification of juvenility-associated genes in the mouse hepatocytes and cardiomyocytes.

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## Supplementary Figures

### Supplementary Figure S1. Appearance of the isolated hepatocytes and cardiomyocytes.

(A) The image of hepatocytes isolated from the P1 mouse taken one day after the isolation. Scale bar, 50  $\mu\text{m}$ .

(B) The image of hepatocytes isolated from the P7 mouse taken one day after the isolation. Scale bar, 50  $\mu\text{m}$ .

(C) The image of hepatocytes isolated from the P56 mouse taken one day after the isolation. Scale bar, 50  $\mu\text{m}$ .

(D) The image of cardiomyocytes isolated from the P1 mouse taken one day after the isolation. Scale bar, 100  $\mu\text{m}$ .

(E) The image of cardiomyocytes isolated from the P7 mouse taken one day after the isolation. Scale bar, 100  $\mu\text{m}$ .

(F) The image of cardiomyocytes isolated from the P56 mouse taken on the day of isolation. Scale bar, 100  $\mu\text{m}$ .

### Supplementary Figure S2. Validation of RNA-seq results with quantitative PCR analyses.

(A) The quantitative PCR (qPCR) analysis of *Igf1bp2*, a hepato-JAG, in the hepatocytes and cardiomyocytes. Data were normalized by *Polr2a*.

(B) The qPCR analysis of *Pleiotrophin*, a cardio-JAG, in the hepatocytes and cardiomyocytes. Data were normalized by *Polr2a*.

(C) The qPCR analysis of common JAGs in the hepatocytes and cardiomyocytes.

Data were normalized by *Polr2a*.

\* $p < 0.05$ , \*\* $p < 0.01$ , Student's t test. Data are represented as mean  $\pm$  SEM.

**Supplementary Figure S3. Association of the common JAGs to the human diseases.**

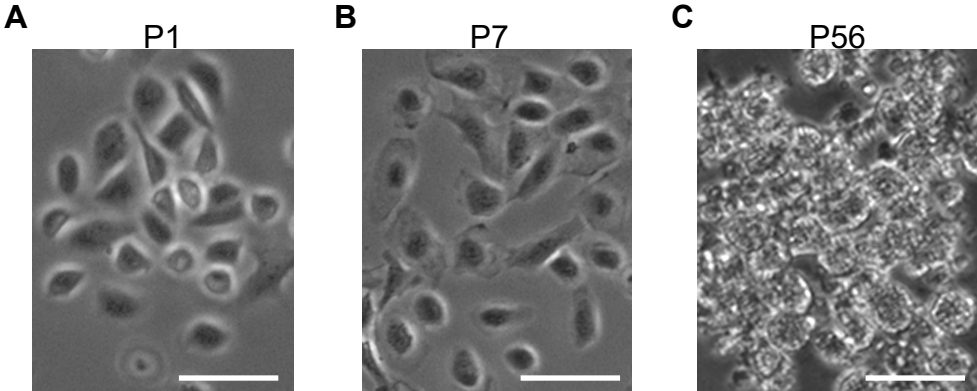
The rates for the successful annotation of the common JAGs and all the genes to any human disease.

**Supplementary Table S1. Sequences of the qPCR primers used in this study.**

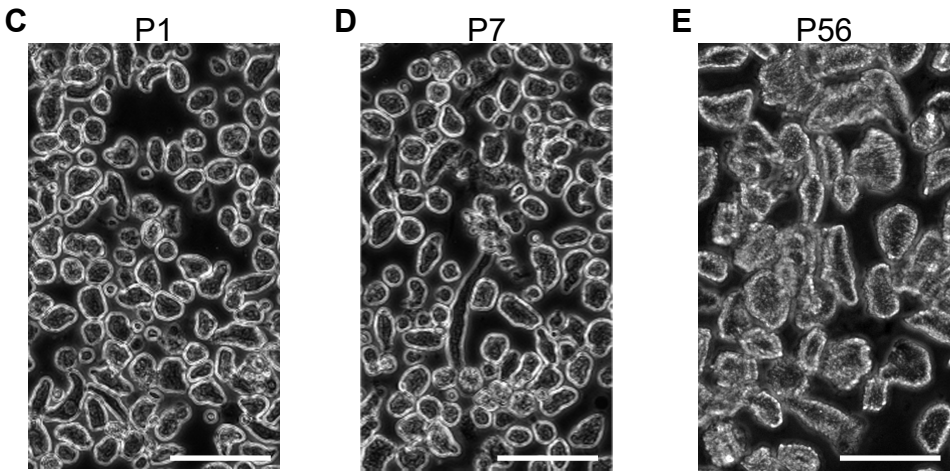
<b>Gene</b>	<b>Forward</b>	<b>Reverse</b>
<i>Polr2a</i>	5'-GAGTCCAGAACGAGTGCATGA-3'	5'-ACAGGCAACACTGTGACAATC-3'
<i>Igfbp2</i>	5'-CAGACCTCGGGTGAGAAAAG-3'	5'-CTGCTACCACCTCCCAACAT-3'
<i>Pleiotrophin</i>	5'-TTTTTCATCTTGGCAGCTGTG-3'	5'-ACACTCCACTGCCATTCTCC-3'
<i>Ezh2</i>	5'-CCTGTTCCCACTGAGGATGT-3'	5'-GAGCCGTCTTTTTTCAGTTG-3'
<i>Gpc3</i>	5'-ACGGGATGGTGAAGTGAAG-3'	5'-AGGTGGTGATCTCGTTGTCC-3'
<i>Uhrf1</i>	5'-ACGGTGCCTACTCATTGGTC-3'	5'-GCTTCTGGTCAGAGGACTGG-3'
<i>Postn</i>	5'-TGGTCACTTCACGCTCTTTG-3'	5'-GCCACTTTGTCTCCCATGAT-3'
<i>Map4k4</i>	5'-CTGGGTCCATCACAGACCTT-3'	5'-TCGGTGAATAACGTGGTGAA-3'
<i>Prmt1</i>	5'-GCCTGCAAGTGAAGAGGAAC-3'	5'-CTCAGGACTGGTGGAGAAGC-3'
<i>Tia1</i>	5'-AGATGCCCGTGTGGTAAAAG-3'	5'-TTCTGCATCCCATTTGTTGA-3'
<i>Sirt6</i>	5'-CCTGTAGAGGGGAGCTGAGA-3'	5'-GAGGTACCCAGGGTGACAGA-3'

**Supplementary Figure S1. Appearance of the isolated hepatocytes and cardiomyocytes.**

Images of the isolated hepatocytes

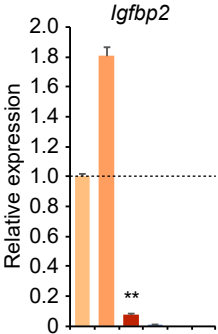


Images of the isolated cardiomyocytes

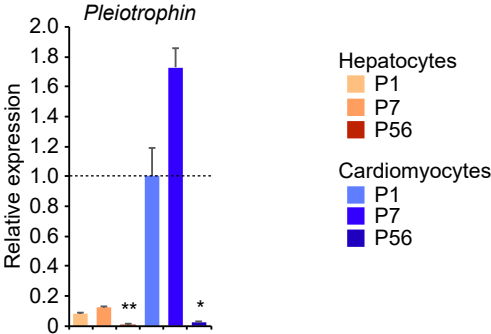


**Supplementary Figure S2. Validation of RNA-seq results with quantitative PCR analyses.**

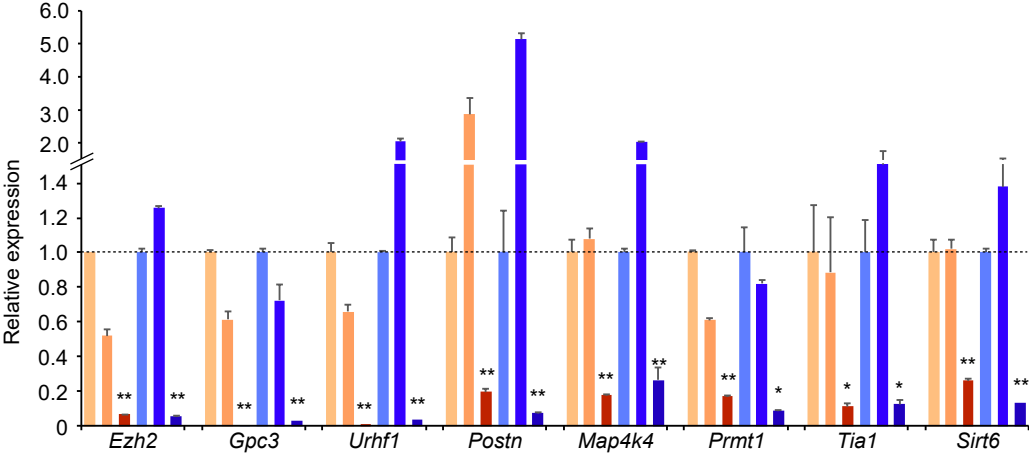
**A** qPCR with a hepato-JAG



**B** qPCR with a cardio-JAG



**C** qPCR with common JAGs



**Supplementary Figure S3. Association of common JAGs with human diseases.**

