



### Supplementary Figure S1: Testing the specificity of the KLF1 antibody

ChIP assays were performed on E13.5 fetal liver cells from WT or KLF1<sup>-/-</sup> (K1KO) human  $\beta$ -globin transgenic mice. The Y-axis represents the relative fold enrichment. The mean IgG enrichment was set as 1.0 and the enrichment in KLF1<sup>-/-</sup> mice was scaled appropriately. The X-axis shows the location of the primers used (**Pr**: promoter, **m**: mouse, **h**: human). Necdin was used as a negative control to which KLF1 is not known to be bound. The  $\beta$ -Actin promoter contains a CACCC element that apparently binds KLF1 in the fetal liver. n= 3 per genotype. Error bars: standard error. \*; significant difference (p-value <0.05); NS: not significant.

**Supplementary Table 1: qRT-PCR primer and probe sequences**

| mRNA                  | Primer sequence 5' – 3'   |
|-----------------------|---|
| KLF1                  | F: CCT CCA TCA GTA CAC TCA CC<br>R: CCT CCG ATT TCA GAC TCA CG  |
| KLF2                  | F: CCA AGA GCT CGC ACC TAA AG<br>R: GTG GCA CTG AAA GGG TCT GT<br><br>NCBI Probe Database Ref. : Pr010051090.1                      |
| Cyclophilin A         | ABI Assay ID : Mm02342430_g1<br>(TaqMan® Gene Expression Assays)  |
| Glycophorin A         | F: GCC GAA TGA CAA AGA AAA GTT CA<br>R: TCA ATA GAA CTC AAA GGC ACA CTG T<br><br>Probe: TTG ACA TCC AAT CTC CTG AGG GTG GTG A       |
| Ey-globin             | F: CAA GCT ACA TGT GGA TCC TGA GAA<br>R: TGC CGA AGT GAC TAG CCA AA<br><br>Probe: TCA AAC TCT TGG GTA ATG TGC TGG TGA TTG           |
| $\beta$ h1-globin     | F: AGC CAG CTA TCA CAA GCA TCT G<br>R: AAC TTG TCA AAG AAT CTC TGA GTC CAT<br><br>Probe: AGA AAC TCT GGG AAG GCT CCT GAT TGT TTA CC |
| $\epsilon$ -globin    | F: GCC TTT GCT AAG CTG AGT GAG<br>R: TTG CCA AAG TGA GTA GCC AGA A<br><br>Probe: TCA AGC TCC TGG GTA ACG TGA TGG TGA                |
| $\gamma$ -globin      | F: GTG GAA GAT GCT GGA GGA GAA A<br>R: TGC CAT GTG CCT TGA CTT TG<br><br>Probe: AGG CTC CTG GTT GTC TAC CCA TGG ACC                 |
| $\beta$ maj-globin    | F: GTG AGC TCC ACT GTG ACA AGC T<br>R: GGT GGC CCA GCA CAA TCA CGA TC<br><br>Probe: CAT CTG GAT CCT GAG AAC TTC AGG CTC CT          |
| Human $\beta$ -globin | F: GCA AGG TGA ACG TGG ATG AAG T<br>R: TAA CAG CAT CAG GAG TGG ACA GA<br><br>Probe: CAG GCT GCT GGT GGT CTA CCC TTG GAC CC          |

**Supplementary Table 2: ChIP primer sequences:**

| Site                   | Primer sequence 5' – 3'                                     |
|------------------------|---|
| m $\beta$ Actin        | F: ACCCCATTGAACATGGCATT<br>R: TGTAGAAGGTGTGGTGCCAGAT        |
| m5'HS2                 | F: AGGGTGTGTGGCCAGATGTT<br>R: ACCCAGATAGCACTGATCAGTCAC      |
| m5'HS3                 | F: CTAGGGACTGAGAGAGGCTGCTT<br>R: ATGGGACCTCTGATAGACACATCTT  |
| mEy promoter           | F: TGCTTCTGACACTCCTGTGATCA<br>R: GGGTTTTTTCCTCAGCAGTAAAGT   |
| m $\beta$ h1 promoter  | F: GGACAGGTCTTCAGCCTCTTGA<br>R: CAGATGCTTGTGATAGCTGCCT      |
| m $\beta$ maj promoter | F: GCTTCTGACATAGTTGTGTTGACTCA<br>R: CAGCAGCCTTCTCAGCATCA    |
| mEy Exon3              | F: GGCTAGTCACTTCGGCAATGAATT<br>R: GGCATAGCGGACACACAGGAT     |
| m $\beta$ h1 Exon3     | F: TGGCAGAAGCTGGTGATTGGA<br>R: TGGACTCAAAGAGGGCATCATAGA     |
| m $\beta$ maj Exon3    | F: GAAGGTGGTGGCTGGAGTGG<br>R: TGTTCACAGGCAAGAGCAGGAA        |
| h5'HS2                 | F: GGCTCAAGCACAGCAATGC<br>R: CATCACTCTAGGCTGAGAACATCTG      |
| h5'HS3                 | F: TCTAAGGACTTGGATTTCAAGGAATT<br>R: CACACCAGCTCGCAAAGTCA    |
| h $\epsilon$ promoter  | F: CACAACTTAGTGTCCATCCATCAC<br>R: CCCTGTTCTCCATGGTACTTAAAAG |
| h $\gamma$ promoter    | F: CAAATATCTGTCTGAAACGGTCCCT<br>R: TGCCTTGTC AAGGCTATTGGT   |
| h $\beta$ promoter     | F: GAGGGTTTGAAGTCCAACTCCTAA<br>R: CAGGGTGAGGTCTAAGTGATGACA  |
| h $\epsilon$ Exon2     | F: CAAGCCCGCCTTTGCTAAG<br>R: CACCTTGAAGTTCTCAGGATCCA        |
| h $\gamma$ Exon2       | F: TGGCAAGAAGGTGCTGACTTC<br>R: GCAAAGGTGCCCTTGAGATC         |
| h $\beta$ Exon2        | F: TGGGCAACCCTAAGGTGAAG<br>R: GTGAGCCAGGCCATCACTAAA         |
| Necdin                 | F: TTCGTCCAGCAGAATTACCTGAAG<br>R: GGACCCCCAGAAGAACTCGTA     |

Primers for the human  $\beta$ -globin locus acquired from Kim et al., 2007 (1).

Primers for the mouse  $\beta$ -globin locus acquired from Kingsley et al., 2006 (2)

## References

1. Kim, A., Kiefer, C. M., and Dean, A. (2007) *Mol. Cell. Biol.* **27**, 1271-1279
2. Kingsley, P. D., Malik, J., Emerson, R. L., Bushnell, T. P., McGrath, K. E., Bloedorn, L. A., Bulger, M., and Palis, J. (2006) *Blood* **107**, 1665-1672