

1 Supplemental Figures-Yang and Gao et al.

2

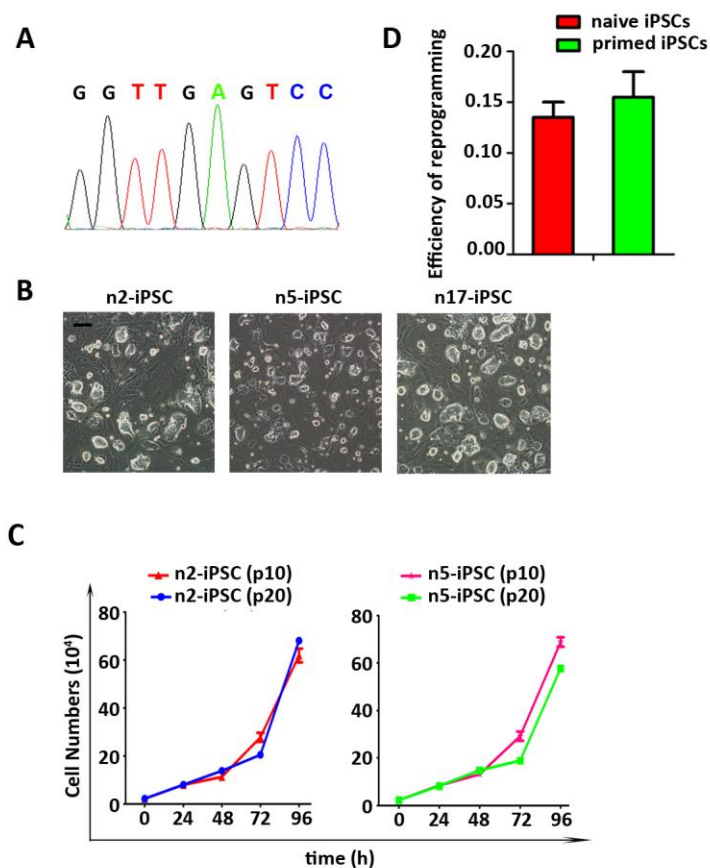


Figure S1

3

4 Figure S1. Morphologies and proliferation rate analysis of naïve iPSCs derived from  
5  $\beta$ -thalassemia fibroblasts.

6 (A), Sequencing results of the  $\beta$ -41/42 mutation sites of HBB gene in fibroblasts.

7 (B), Morphologies of naïve iPSC lines directly derived from human  $\beta$ -thalassemia  
8 fibroblasts. Scale bars, 100 $\mu$ m.

9 (C), Proliferation rate analysis of n2-iPSCs and n5-iPSCs at passage 10 and 20.

10  $2.2 \times 10^4$  cells from each cell line were plated onto feeders and total cell numbers

11 were determined every 24h respectively.

1 (D), Calculation of colony numbers revealed that the efficiencies of naïve  
2 reprogramming and primed reprogramming were approximately 0.135% and  
3 0.155%.

4

5

6

7

8

9

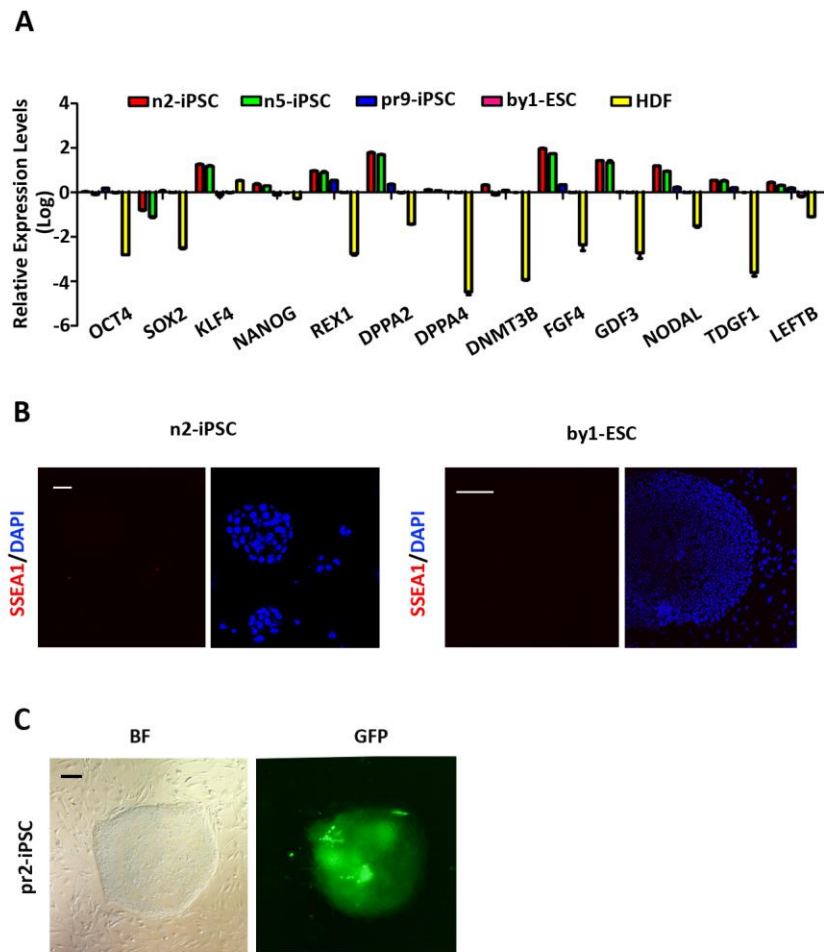


Figure S2

1 ■

2 Figure S2. Differentiation properties of the naïve iPSCs derived from  $\beta$ -thalassemia  
3 fibroblasts.

4 (A), Quantitative PCR analysis of expression levels of ESC-specific genes. Data are  
5 shown as mean  $\pm$  S.E.M., n=3 individual experiments.

6 (B), Immunostaining images showed that n2-iPSC and by1-hESC are negative for cell  
7 surface marker SSEA1. Scale bars, 20 $\mu$ m.

8 (C), Morphologies of GFP-labeled pr2-iPSC. Scale bars, 50 $\mu$ m.

9

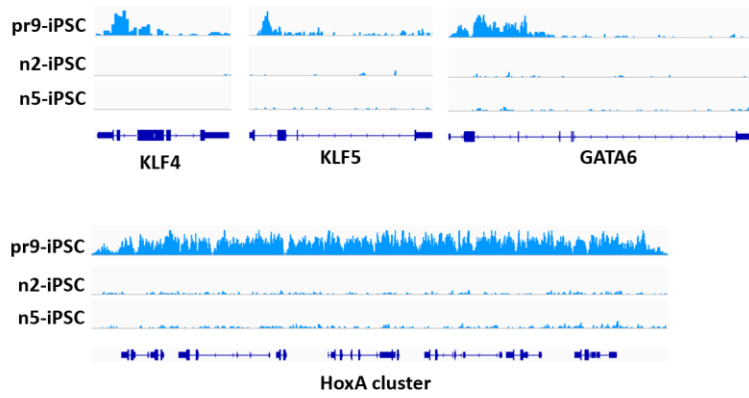


Figure S3

1

2 Figure S3. ChIP-seq tracks for H3K27me3 in pr9-iPSCs, n2-iPSCs and n5-iPSCs at  
 3 genes related to naïve pluripotency and development.

4

5

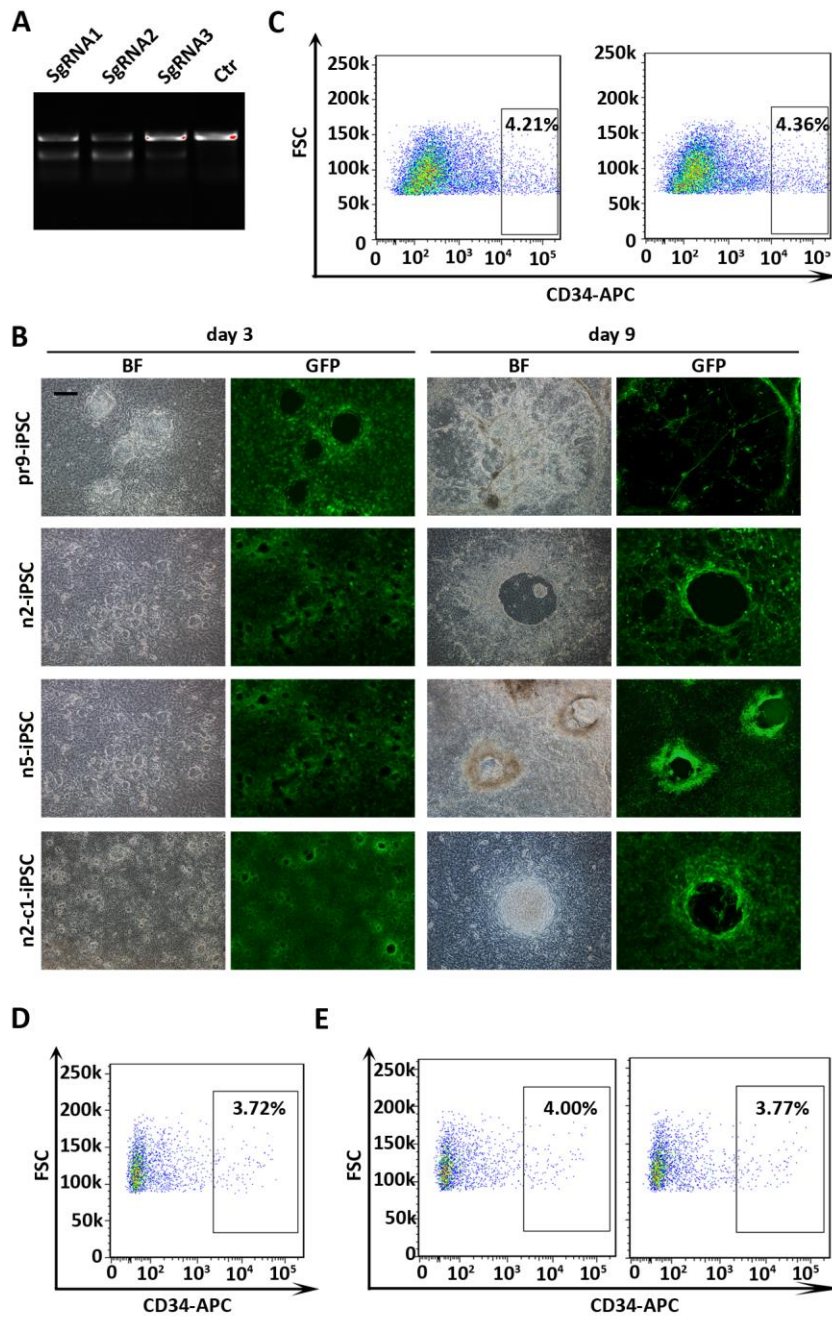


Figure S4

1

2

3

4

5

1 Figure S4. Hematopoietic differentiation of the naïve iPSCs derived from fibroblasts.  
2 (A), Three sgRNAs were tested by T7E1 assay to detect cleavage efficiency at HBB  
3 gene locus.  
4 (B), Morphological changes of primed and naïve iPSC lines co-cultured with OP9  
5 stromal cells at day 3 and day 9. Primed iPSCs, Pr9-iPSCs; Naïve iPSC lines, n2-  
6 iPSCs, n5-iPSCs and n2-c1-iPSCs. Scale bars, 100µm.  
7 (C), Flow cytometry analysis of the ratios of human CD34<sup>+</sup> cells differentiated from  
8 the two corrected naïve iPSC lines.  
9 (D), Flow cytometry analysis of human CD34<sup>+</sup> cells derived from n2-iPSCs.  
10 (E), Flow cytometry analysis of human CD34<sup>+</sup> cells derived from pr2-iPSCs and pr9-  
11 iPSCs.  
12  
13  
14  
15  
16