

Table S1. Isolation of endothelial and hematopoietic progenitors based on the expression of Flk1

Experiment	Flk1 negative		Flk1 positive	
	Endothelial colonies	Hematopoietic colonies	Endothelial colonies	Hematopoietic colonies
1	0	0/33,612	14	2/382
2	0	0/2300	11	4/813
3	1	0/21,408	13	2/795
4	0	1/21,408	15	7/795
5	2	1/27,335	15	5/624

Cells from embryos around E7.5 were separated into either Flk1- or Flk1+ cells by flow cytometry. They were cultured with OP-9 cells in the presence of a combination of cytokine factors for 7 days. The numbers of endothelial or hematopoietic colonies per the number of cells plated are shown. A total of 99 embryos was used: 10 LS-, 4 OB- and 29 LB-stage embryos for experiment 1; 3 OB-, 1 EB-, 9 LB- and 4 EHF-stage embryos for experiment 2; 1 MS-, 4 LS-, 5 OB-, 1 EB- and 14 LB-stage embryos for experiments 3 and 4; and 1 ES-, 1 MS-, 1 LS-, 4 OB-, 3 EB- and 4 LB-stage embryos for experiment 5.

Table S2. Isolation of endothelial and hematopoietic progenitors based on the expression of Tie2

Experiment	Tie2 negative		Tie2 positive	
	Endothelial colonies	Hematopoietic colonies	Endothelial colonies	Hematopoietic colonies
1	1	0/13,850	4	0/357
2	4	1/12,949	5	2/91
3	23	2/5988	16	11/413

Cells from embryos around E7.5 were separated into either Tie2⁻ or Tie2⁺ cells by flow cytometry. They were cultured with OP-9 cells in the presence of a combination of cytokine factors for 7 days. The numbers of endothelial or hematopoietic colonies per the number of cells plated are shown. A total of 33 embryos was used: 3 ES-, 2 MS-, 1 LS-, 4 OB- and 5 LB-stage embryos for experiment 1; 2 ES-, 3 MS-, 3 LS- and 1 EB-stage embryo for experiment 2; 3 OB-, 2 EB- and 4LB-stage embryos for experiment 3.

Table S3. Presence of CFU-c in Oct3/4-GFP⁺ E7.5 cells

Experiment	Number of CFU-c (mean±s.d.)/cells	
	Oct3/4-GFP negative	Oct3/4-GFP positive
1	26±5.1/3220	0±0/1071
2	27±2.9/2021	0±0/667
3	29±1.2/2953	0±0/962

Cells from Oct3/4-GFP transgenic E7.5 embryos were separated into either GFP⁻ or GFP⁺ cells by flow cytometry. They were cultured with methylcellulose in the presence of a combination of cytokine factors for 7 days. The numbers of CFU-c are shown in mean±s.d. ($n=3$). A total of 27 embryos was used: 2 LS-, 3 OB-, 1 EB and 1 LB-stage embryo for experiment 1; 2 LS-, 1 OB-, 3 EB and 1 LB-stage embryo for experiment 2; 2 LS-, 4 OB-, 2 EB and 5 LB-stage embryos for experiment 3.