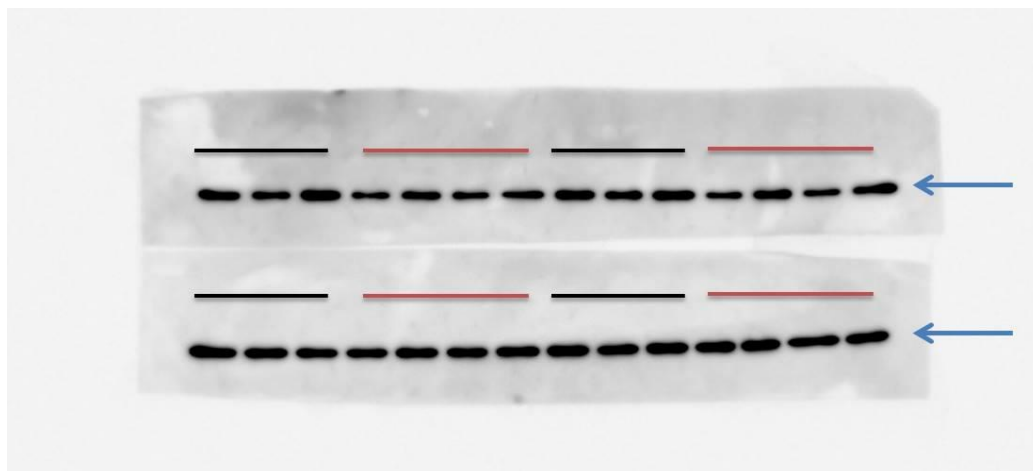


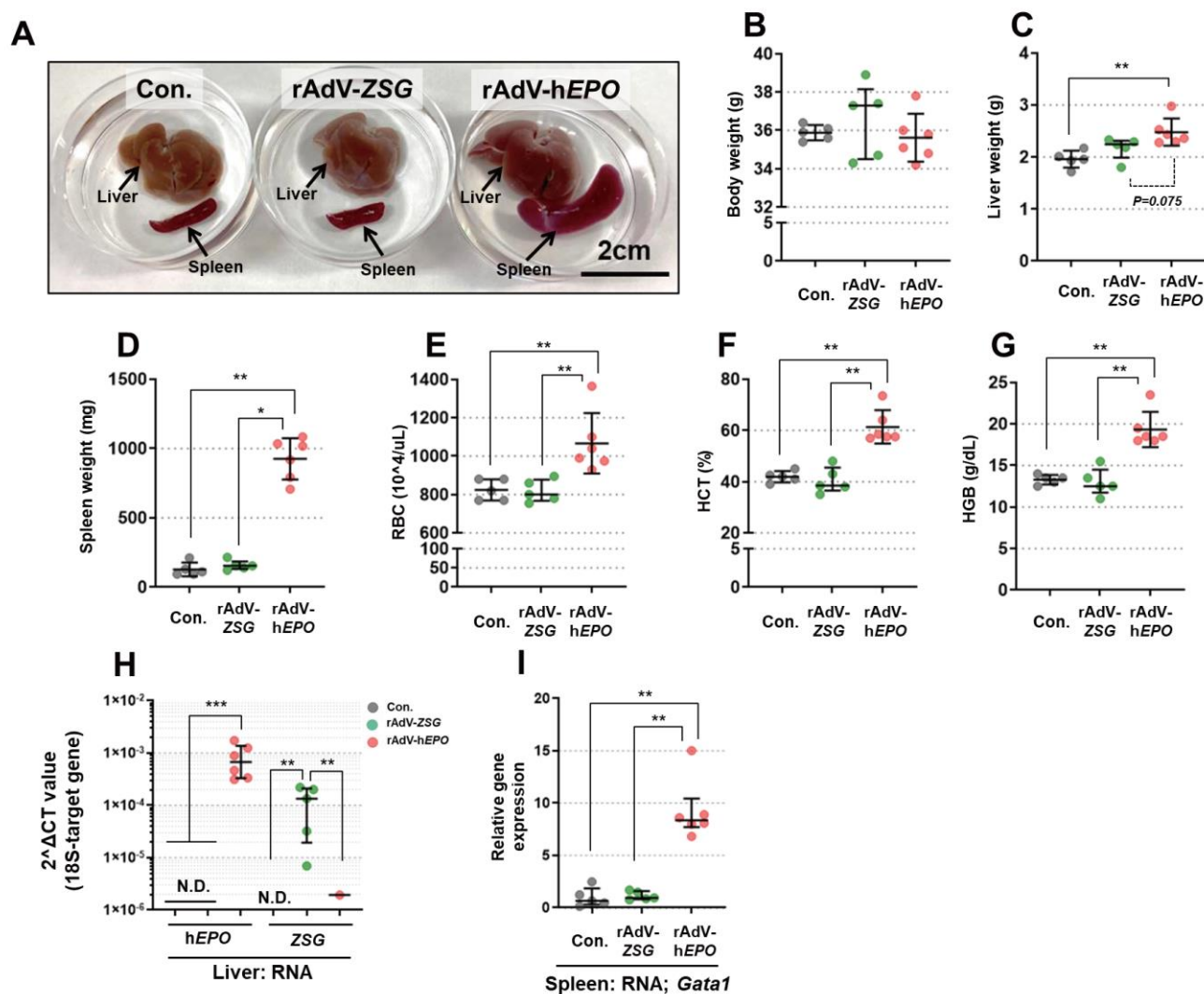
**Figure S1.** Blot raw data for the detection of total EPO in the liver.

The lanes under the black line are for control mice ( $n = 12$ ), and those under the red line are for *AdEPO* mice ( $n = 16$ ). The light blue arrow indicates the position of the target bands.



**Figure S2.** Blot raw data for GAPDH expression in the liver.

The lanes under the black line are for control mice ( $n = 12$ ), and those under the red line are for *AdEPO* mice ( $n = 16$ ). The light blue arrow indicates the position of the target bands.

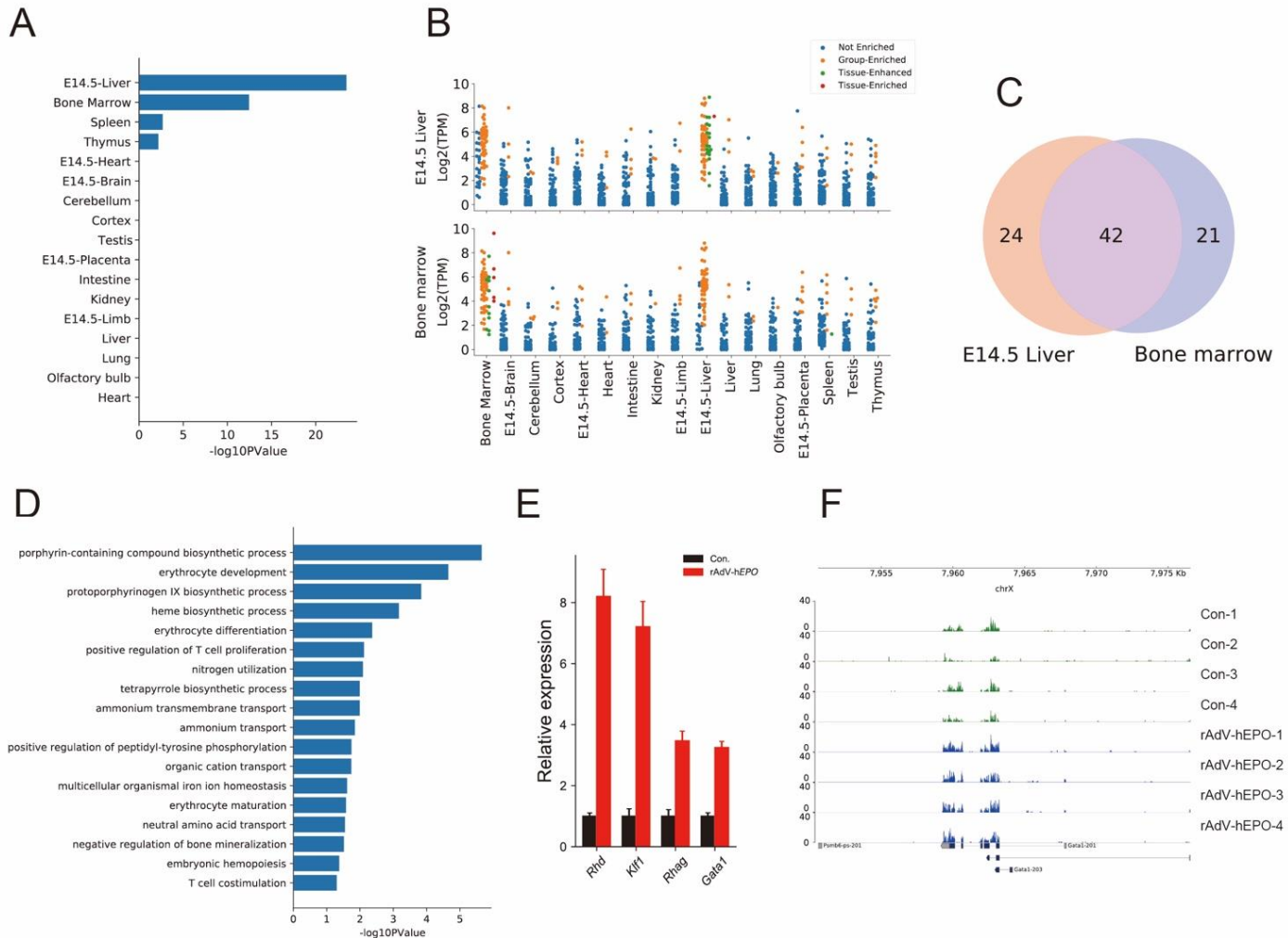


**Figure S3.** No hematopoietic effect of the rAdV unit alone in mice.

The phenotypes and parameters for hematopoiesis were measured in the Con. (n = 5), rAdV-ZSG (n = 5), and rAdV-hEPO (n = 6) groups. (A) representative photographs of the livers and spleens of mice, B: body weights of the mice, (C) liver weight, (D) spleen weight, (E) RBC count ( $10^4/\mu\text{L}$ ), (F) HCT (%), (G) Hgb level (g/dL), (H) gene expression levels of hEPO and ZSG in the liver shown using the TB Green qPCR assay, (I) gene expression of *Gata1* in the spleen. N.D.: not detected. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .



genes in rAdV-hEPO. C5.go.v7.4.symbols list of upregulated (G) and downregulated (H) genes in rAdV-hEPO. Values are reported as the normalized enrichment score (NES).



**Figure S5.** TSEA predicting hematopoiesis in tissue status as reflected by gene expression profile.

(A) TSEA showing significantly enriched tissues of DEGs. (B) Dot plots showing tissue gene expression of E14.5 liver- and bone marrow-enriched genes in each tissue. (C) Venn diagram indicating DEGs annotated in E14.5 liver and bone marrow. (D) Enrichment analysis by DAVID showing significantly enriched terms in the 42 overlapping genes from Fig. S5C. (E) Relative gene expression (Con. = 1.0) showing erythrocyte development terms in Fig. S5D. Error bars indicate the SEM. (F) Genome browser indicating the read mapping results of the *Gata1* genome region.