

Supplementary Data

1. Supplementary Figures

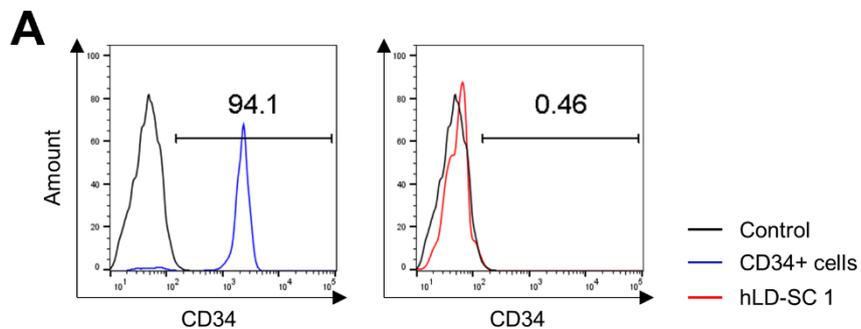


Figure S1. Flow cytometry histogram profiles of CD34-positive cells. (A) Flow cytometry measurement of CD34-positive cells and hLD-SC 1.

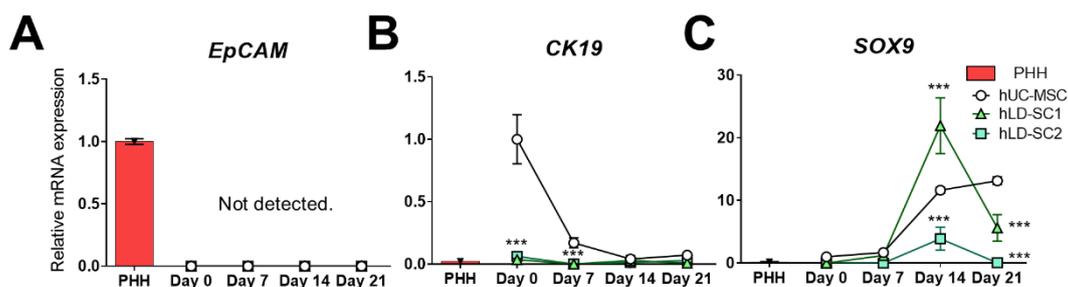


Figure S2. Relative normalized expression of *EpCAM*, *CK19*, and *SOX9*. (A – C) Expression levels of (A) *EpCAM*, (B) *CK19*, and (C) *SOX9* were normalized to *GAPDH* and compared to the expression levels of hUC-MSCs on differentiation day 0. Two-way analysis of variance (ANOVA) was used for statistical analysis, and *P*-values of hLD-SCs were compared to hUC-MSCs on differentiation days 0, 7, 14, and 21. *p*-values with < 0.05 were considered significant. $n = 4$. *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

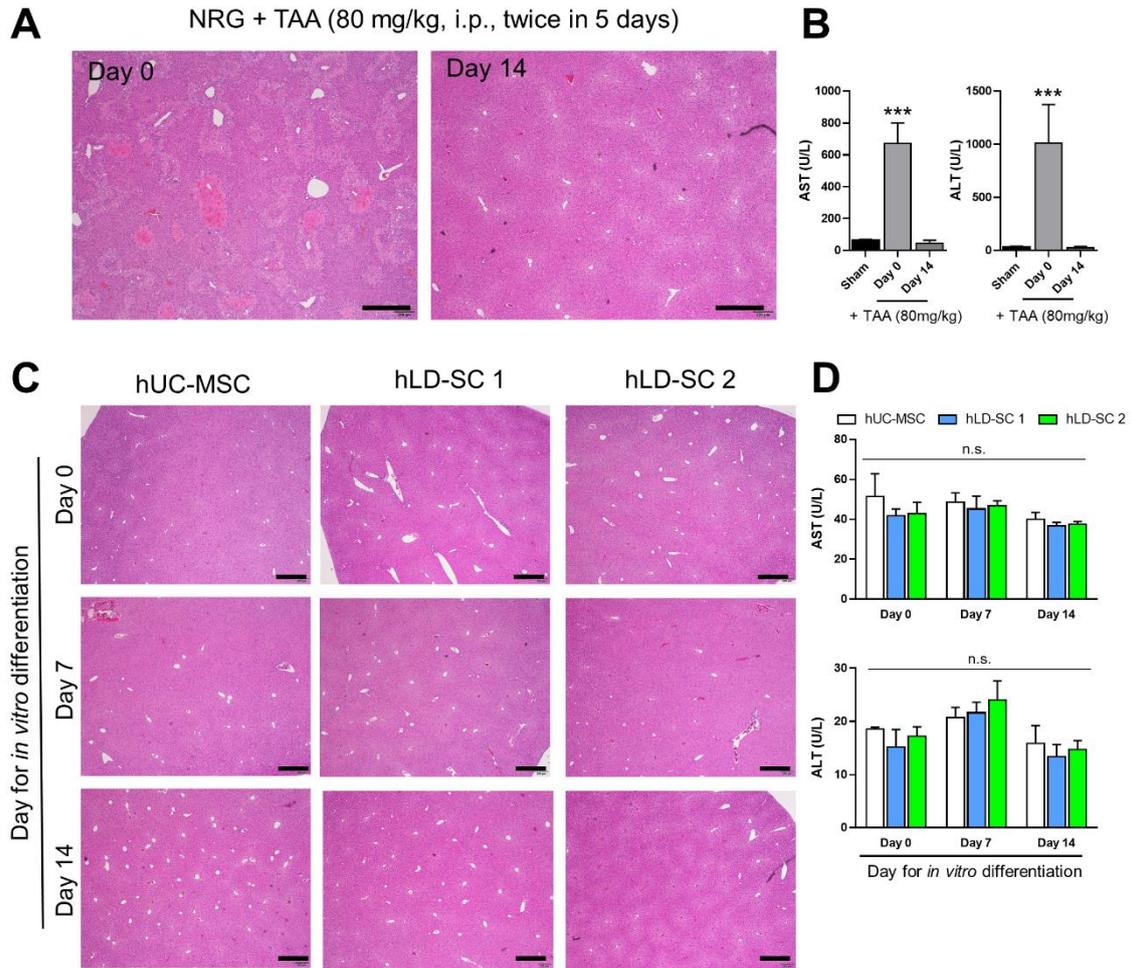


Figure S3. Thioacetamide (TAA)-induced acute liver injury was mostly recovered within 14 days. (A) Hematoxylin and eosin (H&E) staining for liver histology. 40× magnification; Scale bar, 500 μm. (B) Serum levels of aspartate transaminase (AST) and alanine transaminase (ALT) on day 0 and day 14 after TAA (80 mg/kg) administration. *P*-values < 0.05 were considered significant. *n* = 3. ***, *p* < 0.001. (C) H&E staining results for hUC-MSC- and hLD-SC-transplanted mice on day 14. 40× magnification; Scale bar, 500 μm. (D) Serum levels of AST and ALT on day 14 after cell transplantation. *p*-values < 0.05 were considered significant. *n* = 3 for sham; *n* = 4 for other groups. n.s., not significant.

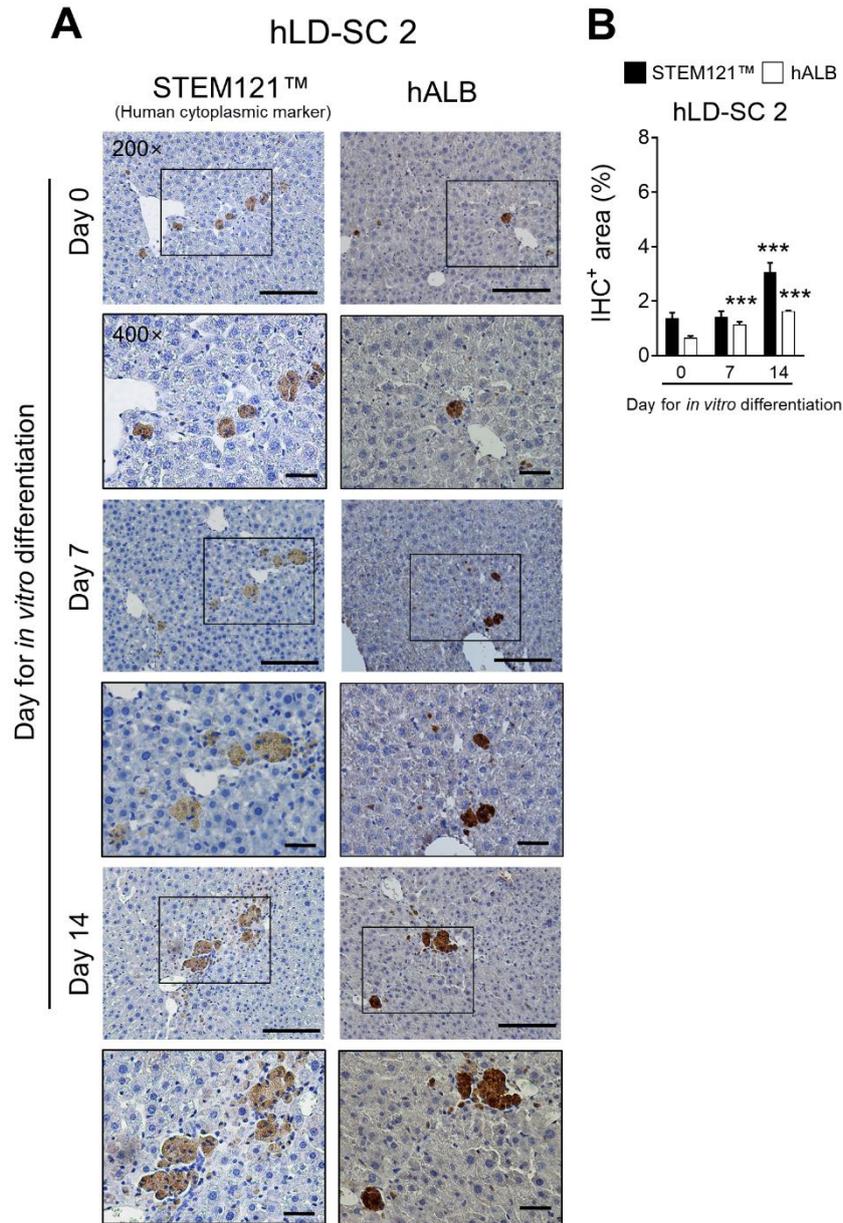


Figure S4. Observation of spontaneous hepatocyte differentiation and maturation of hLD-SC 2 in thioacetamide (TAA)-induced acute liver injury mice. (A) Representative images of human STEM121TM (human cytoplasmic marker) and human albumin (hALB) immunohistochemistry in mice restored 14 days after stem cell transplantation. Scale bar, 100 μ m for 200 \times magnification; 50 μ m for 400 \times magnification. (B) STEM121TM and hALB-positive area (%) of hUC-MSCs and hLD-SCs are expressed as average \pm standard deviation and each value was compared to day 0. *P*-values < 0.05 were considered significant. *n* = 4. *, *p* < 0.05; **, *p* < 0.01; ***, *p* < 0.001.

2. Supplementary Table

Table S1. Primer details for *EpCAM*, *CK19*, and *SOX9*.

Gene Name	Primer Sequences (5' to 3')
Human	
<i>EpCAM</i>	Forward: GAACAATGATGGGCTTTATG Reverse: TGAGAATTCAGGTGCTTTTT
<i>CK19 (KRT19)</i>	Forward: TCCGAACCAAGTTTGAGACG Reverse: CCCTCAGCGTACTGATTTC
<i>SOX9</i>	Forward: GAGGAAGTCGGTGAAGAACG Reverse: ATCGAAGGTCTCGATGTTGG



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