

Supplementary figure legends

Figure S1. The expression of chemokines CXCL9, CXCL10 and CXCL11 were not affected in abortion DSCs.

mRNA was collected from Normal DSC and Abortion DSC, and the expression of CXCL9, CXCL10 and CXCL11 was detected by Q-PCR. The results are representative of four independent experiments and are represented by mean SEM. Significant differences were analyzed by two-way ANOVA, and are expressed as n.s. no significance.

Figure S2. UCHL1 inhibitor LDN57444 suppressed the decidualization in a dose-dependent manner.

(A) HESCs were treated with different doses of LDN57444 on the day when decidualization was induced. mRNA from HESCs at D3 of decidualization was collected and the expression level of decidual markers IGFBP1 and PRL was detected by Q-PCR. (B) Protein from indicated dose of LDN57444-treated HESCs at D3 of decidualization was collected and the protein level of decidual markers IGFBP1 was detected by western blot. (C) In the *in vitro* decidualization assay, HESCs were treated with DMSO or LDN57444 (5 μ M). mRNAs were collected from HESCs at D1, D3, D5, D7 of decidualization, and the expression of BMP2 and WNT4 was determined by Q-PCR. The results are representative of four independent experiments and are represented by mean $\pm$ SEM. Significant differences were analyzed by one-way ANOVA (A), or two-way ANOVA (C), and are expressed as ** $P < 0.01$, * * * $P < 0.001$.

Figure S3. UCHL1 was knocked down efficiently with shRNAs in HESCs.

(A, B) HESCs were transfected with lentivirus expressing shRNA targeting UCHL1 (shUCHL1-1, shUCHL1-2, shUCHL1-3) or scramble shRNA (SCR). The expression level of UCHL1 was measured by Q-PCR (A) and western blot (B) in shUCHL1(shUCHL1-1, shUCHL1-2, shUCHL1-3) HESCs or SCR-HESCs. The results are representative of four independent experiments and are represented by mean $\pm$ SEM. Significant differences were analyzed by one-way ANOVA (A), and are expressed as ** $P < 0.01$.

Figure S4. UCHL1 was successfully overexpressed in HESCs.

(A, B) HESCs were infected with pLVX-IRES-zsGreen1-UCHL1 (UCHL1-OE) or pLVX-IRES-zsGreen1 (NC-OE) lentivirus, and the GFP⁺ HESCs were sorted by FACS. The expression of UCHL1 was measured by Q-PCR **(A)** and western blot **(B)**. The results are representative of four independent experiments and are represented by mean $\pm$ SEM. Significant differences were analyzed by Mann-Whitney U test **(A)** and are expressed as * $P < 0.05$.

Figure S5. The activation of ERK/FOXO1 was uninfluenced by UCHL1 inhibitor during decidualization.

The activation of ERK/FOXO1 signaling pathways were determined in DMSO or LDN57444 treated HESCs at indicated days of decidualization by western blot.

Figure S1

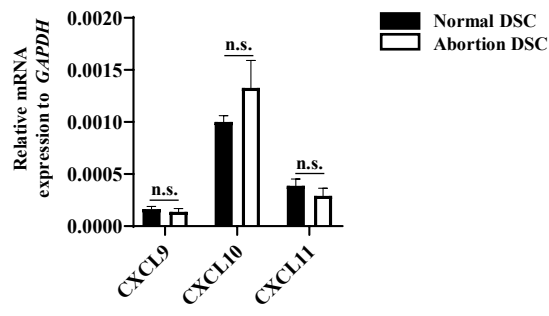


Figure S2

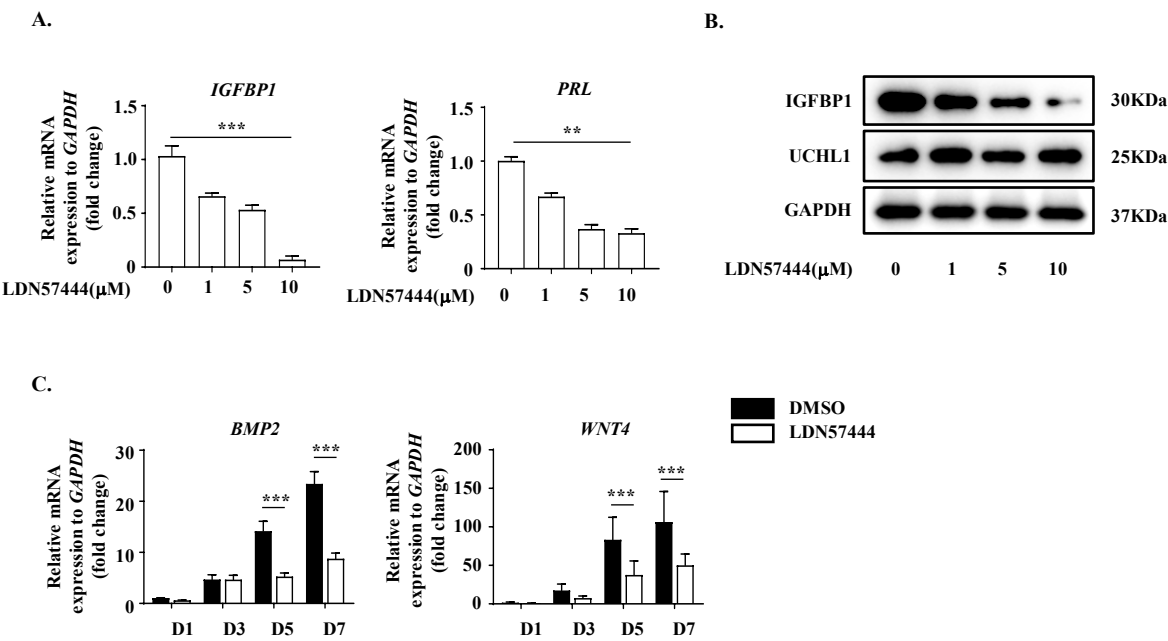


Figure S3

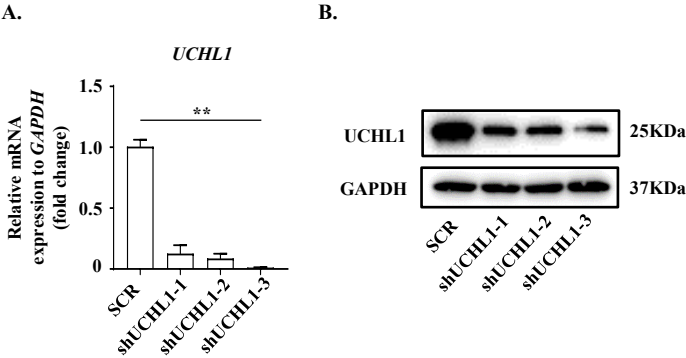


Figure S4

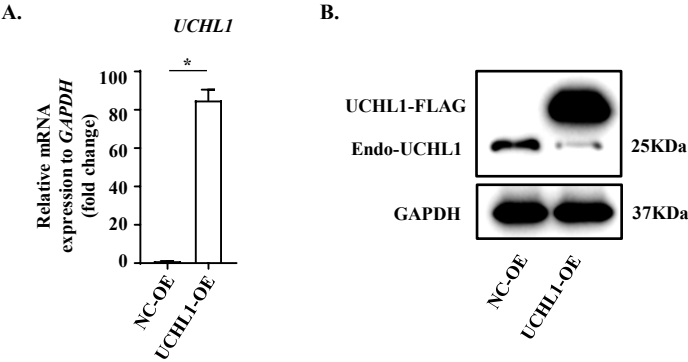


Figure S5

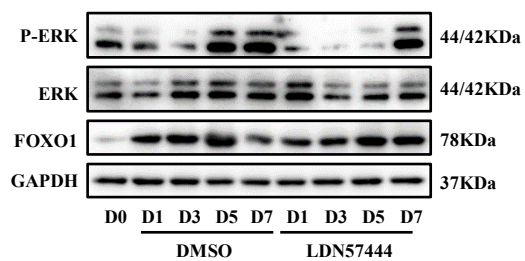


Table S1. The sequences of primers

Name	Primer (5' - 3')
<i>GAPDH</i>	GGATTTGGTCGTATTGGG GGAAGATGGTGATGGGATT
<i>UCHL1</i>	CCTGTGGCACAATCGGACTTA CATCTACCCGACATTGGCCTT
<i>IGFBP1</i>	TTGGGACGCCATCAGTACCTA TTGGCTAAACTCTCTACGACTCT
<i>PRL</i>	TGACCCTTCGAGACCTGTTTG CTTGCTCCTTGTCTTCGGG
<i>BMP2</i>	ACCCGCTGTCTTCTAGCGT TTTCAGGCCGAACATGCTGAG
<i>CCL2</i>	CAGAAGTGGGTTTCAGGATTCC ATTCTTGGGTTGTGGAGTGAG
<i>IL-15</i>	TTGGGAACCATAGATTTGTGCAG AGAGAAAGCACTTCATTGCTGTT
<i>TGFβ1</i>	CTAATGGTGGAAACCCACAACG TATCGCCAGGAATTGTTGCTG
<i>CXCL9</i>	GTGGTGTTCCTTTTCTCTTGGG ACAGCGACCCTTTCTCACTAC
<i>CXCL10</i>	GTGGCATTCAAGGAGTACCTC TGATGGCCTTCGATTCTGGATT
<i>CXCL11</i>	GACGCTGTCTTTGCATAGGC GGATTTAGGCATCGTTGTCCTTT
<i>CXCL12</i>	ATTCTCAAACTCCAAACTGTGC ACTTTAGCTTCGGGTCAATGC
<i>IDO</i>	GCCAGCTTCGAGAAAGAGTTG ATCCCAGAACTAGACGTGCAA
<i>OPN</i>	CTCCATTGACTCGAACGACTC CAGGTCTGCGAAACTTCTTAGAT
<i>Uchl1</i>	GATGCTGAACAAAGTGTTGGC GGAGTTTCCGATGGTCTGCTT
<i>Igfbp1</i>	CTGCCAAACTGCAACAAGAATG GGTCCCCTCTAGTCTCCAGA
<i>Prl</i>	TTCTGCCAAAATGTTTCAGCCT CTTGACCATAAACTCACGGTCTT
<i>Actb</i>	GGCTGTATTCCCCTCCATCG CCAGTTGGTAACAATGCCATGT