Figure S1. Immunofluorescence assay of primary cultured endometrial stromal cells showed positive staining for the stromal marker, vimentin (green), and negative staining for the epithelial marker, pan-cytokeratin (red). DAPI (blue) was used to stain nuclei. Magnification, x400.

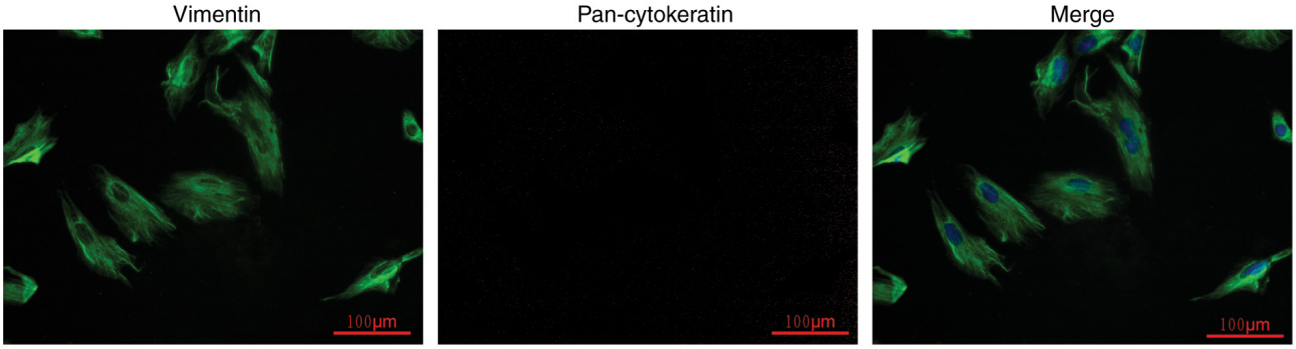

Figure S2. Hypoxia-induced LDHA mRNA expression in endometrial cells. Reverse transcription-quantitative PCR assay of HIF-1α and LDHA mRNA expression in (A) NESCs, (B) EuESCs, (C) EcESCs and (D) Ishikawa cells under normoxia or hypoxia (NESCs, EuESCs and EcESCs; 10 cases for each cell type). 18S was used as an internal control. Values are expressed as mean ± SD of three independent experiments. One-way ANOVA and Bonferroni post hoc test were used to analyze multiple comparisons. *P<0.05, **P<0.01 and ***P<0.001 vs. 0 h. LDHA, lactate dehydrogenase A; HIF-1α, hypoxia-inducible factor 1α; NESCs, normal endometrial stromal cells; EuESCs, eutopic endometrial stromal cells; EcESCs, ectopic endometrial stromal cells.

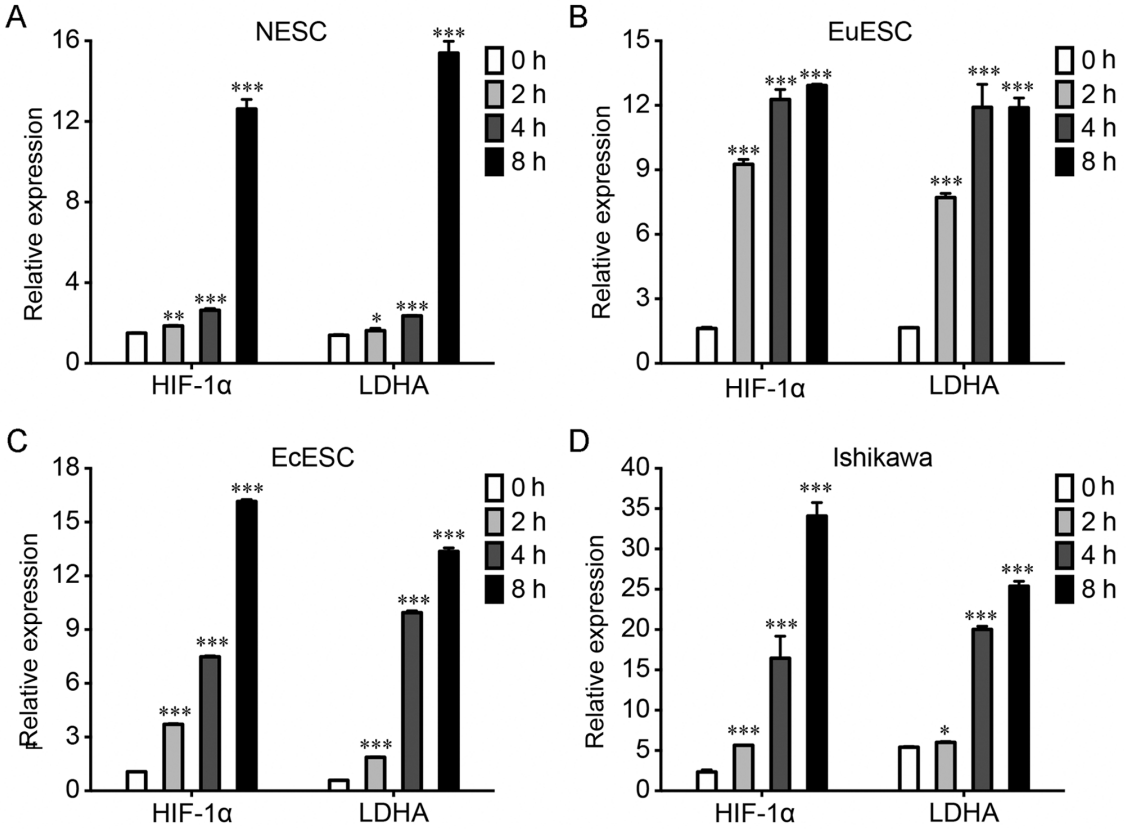

Figure S3. Effect of LDHA-knockdown on cell cycle distribution of Ishikawa cells and THESC cells. Representative graphs of cell cycle distribution as evaluated by flow cytometry in (A) Ishikawa cells and (B) THESC cells treated with sh-LDHA or sh-Con. Percentage-based histograms showing the cell cycle distribution of (C) Ishikawa cells and (D) THESC cells in the sh-LDHA treatment group compared with control (sh-Con). Western blot analysis of cell cycle-related proteins in (E) Ishikawa cells and (F) THESC cells when treated with sh-LDHA or the control (sh-Con). Values are expressed as mean ± SD of three independent experiments. One-way ANOVA and Bonferroni post hoc test were used to analyze multiple comparisons. *P<0.05, vs. sh-Con, G_1-phase and S-phase Ishikawa cells. LDHA, lactate dehydrogenase A; sh-, short hairpin; Con, control.

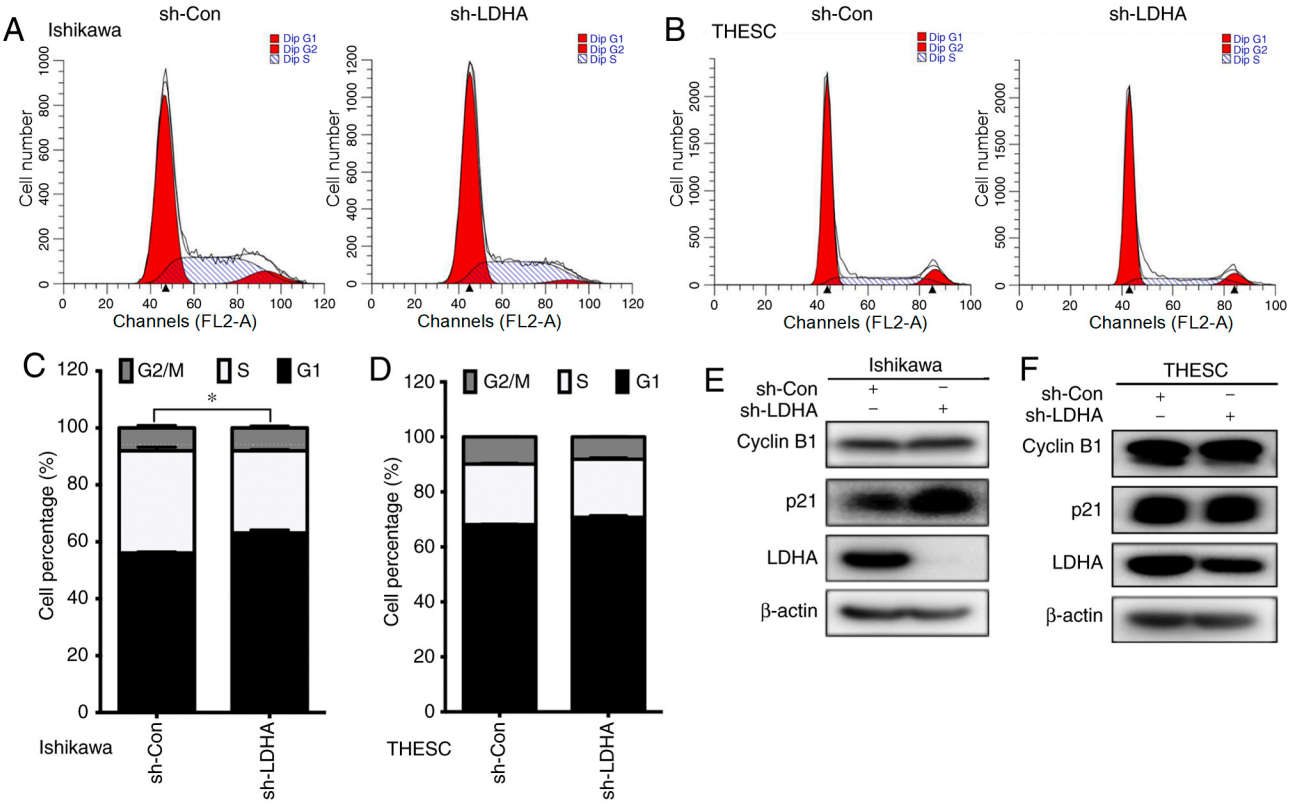

Figure S4. Effects of LDHA-knockdown on migration and proliferation of Ishikawa cells and THESC cells. Effect of LDHA-knockdown on (A) Ishikawa cell and (B) THESC migration was evaluated using a Transwell assay. Migrated cells were stained by crystal violet (magnification, x100). (C) Cells were counted using microscopy and histograms summarizing this data show the effect of sh-LDHA on Ishikawa cells (left panel) and THESC cells (right panel) compared with the control group (sh-Con). (D) Western blot analysis of E-cadherin, vimentin, β-catenin and LDHA expression in Ishikawa cells and THESC cells. (E and F) Cell Counting Kit-8 assay was used to examine cell proliferation. Values are expressed as mean ± SD of three independent experiments. Student's t-test was used to compare two groups. $^{**}P<0.01$ and $^{***}P<0.001$ vs. sh-Con. LDHA, lactate dehydrogenase A; sh-, short hairpin; Con, control.

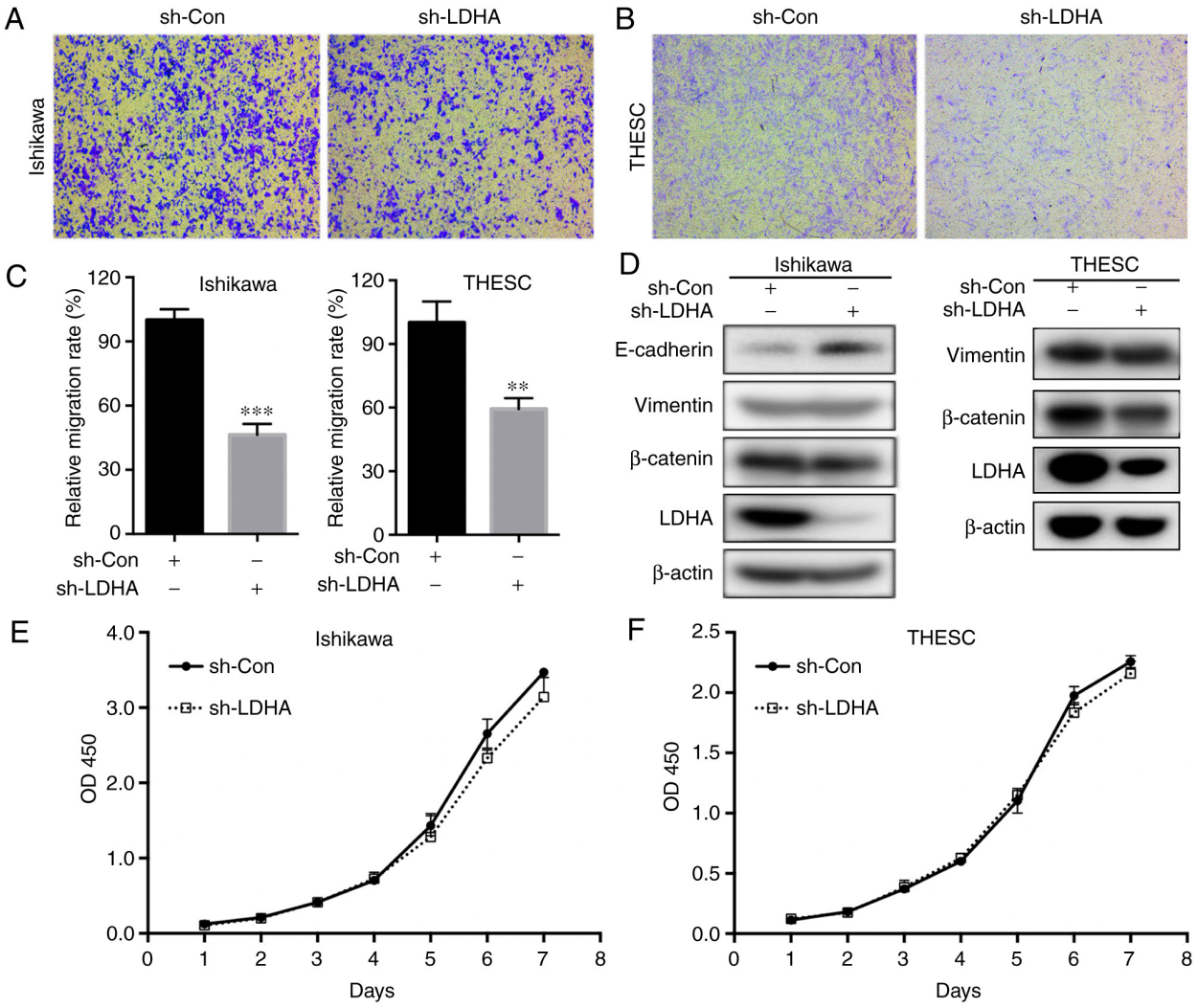

Table SI. Antibodies used in western blotting.

Protein name	Company	Catalogue number
β-actin	ProteinTech Group, Inc.	66009-1-lg
LDHA	Cell Signaling Technology, Inc.	3582S
HIF-1α	Abcam	ab51608
Cyclin B1	Cell Signaling Technology, Inc.	12231S
Cleaved-caspase 3	Cell Signaling Technology, Inc.	9664S
Caspase 3	Cell Signaling Technology, Inc.	9662S
PDK1	Cell Signaling Technology, Inc.	3062S
p21	Cell Signaling Technology, Inc.	2947S
E-cadherin	Cell Signaling Technology, Inc.	3195S
Vimentin	Cell Signaling Technology, Inc.	5741S
β-catenin	Cell Signaling Technology, Inc.	8480S
BCL-2 family kit	Cell Signaling Technology, Inc.	9942T
Pan-cytokeratin	Abcam	ab215838

LDHA, lactate dehydrogenase A; HIF-1α, hypoxia inducible factor 1α; PDK, pyruvate dehydrogenase kinase 1.

Table SII. Primers used for reverse transcription-quantitative PCR.

Gene name (species)	Primer sequences, 5'-3'
LDHA (human)	
Forward	GGTTGGTGCTGTTGGCATGG
Reverse	TGCCCCAGCCGTGATAATGA
HIF-1α (human)	
Forward	TGAGCCTAATAGTCCCAGTGAA
Reverse	TAGGGAGCTAACATCTCCAAGT
18S (human)	
Forward	CTCTTAGCTGAGTGTCCCGC
Reverse	CTGATCGTCTTCGAACCTCC

LDHA, lactate dehydrogenase A; *HIF-1α*, hypoxia inducible factor 1α.

Table SIII. Differences in the expression levels of lactate dehydrogenase A (based on H-Score) in paired eutopic and ectopic tissues obtained from 25 patients with endometriosis.

Cell type	Eutopic endometrium	Ectopic endometrium	P-value[a]
Glandular cells	0.5 (0-1.75)	1.0 (0.5-3.0)	0.007
Stromal cells	0.5 (0-0.5)	1.0 (0.5-2.5)	<0.001

[a]Wilcoxon signed-rank test. Data are presented as the median (25th-75th percentile).