

Supplementary Material

Caveolin-1 promotes trophoblast cell invasion through the focal adhesion kinase (FAK) signalling pathway during early human placental development

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Table S1. Primers used in real-time RT-PCR

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
Actg1	CCCGAGCCGTGTTTCCTT	GTCCCAGTTGGTGACGATGC
Akt1	TGTTCTTCCACCTGTCCCG	ATGTGCCCCGTCCTTGTC
Bad	CGGAGGATGAGTGACGAGTT	GGGATGTGGAGCGAAGGT
Cav1	GCTGAGCGAGAAGCAAGT	CGTCACAGTGAAGGTGGTG
Col4a1	ATTACTACGCAAACGCTTACA	CAGGCTTCATTATGTTCTTCTC
Col4a2	GTGAAGCACAGCCAGACGG	GTAGCAGACATCACCAGGGTT
Grb2	AGCAAACAGCGGCACGAT	GAATTGAACTTCACCACCCAGAG
Gsk3b	GTCGCCATCAAGAAAGTA	CCAGCACCAGATTAAGATA
β -actin	TACCACAGGCATTGTGTAGGACT	TTGATGTCACGCACGATTCCT

Table S2. siRNA sequence

Name	Sense sequence(5'-3')	Antisense sequence(5'-3')
Si-CAV1-1	CCUUCACUGUGACGAAAUATT	UAUUUCGUCACAGUGAAGGTT
si-CAV1-2	GCCGUGUCUAUCCAUCUATT	GCCGUGUCUAUCCAUCUATT

Table S3. CAV1 sequence

NM_001753 at gtctgggggc aaatacgtag

301 actcggaggg acatctctac accgttcca tccgggaaca gggcaacatc tacaagccca
361 acaacaaggc catggcagac gagctgagcg agaagcaagt gtacgacgcg cacaccaagg
421 agatcgacct ggtaaccgc gaccctaac acctcaacga tgacgtggtc aagattgact
481 ttgaagatgt gattgcagaa ccagaaggga cacacagttt tgacggcatt tggaaggcca
541 gcttcaccac cttcactgtg acgaaatact ggttttaccg cttgctgtct gcctctttg
601 gcatcccgat ggcactcacc tggggcattt acttcgcat tctctcttc ctgcacatc
661 gggcagttgt accatgcatt aagagcttc tgattgagat tcagtgcac agccgtgtct
721 attcatcta cgtccacacc gtctgtgacc cactctttga agctgttggg aaaatattca
781 gcaatgtccg catcaacttg cagaaagaaa tataa

Table S4. 34 differentially expressed genes that are related to FAK signaling pathway

Genbank accession	Gene Symbol	Genbank accession	Gene Symbol
NM_009609	Actg1	NM_011949	Mapk1
NM_009652	Akt1	NM_207692	Mapk9
NM_007522	Bad	NM_010937	Nras
NM_009796	Capn7	NM_001080773	Pdpk1
NM_007616	Cav1	NM_029094	Pik3cb
NM_009931	Col4a1	NM_027892	Ppp1r12a
NM_009932	Col4a2	NM_001316672	Prkcb1
NM_008054	Fyn	NM_007982	Ptk2
NM_008163	Grb2	NM_133223	Rac3
NM_019827	Gsk3b	NM_029780	Raf1
NM_001161724/NM_010562	Ilk	NM_024457	Rap1b
NM_008397	Itga6	NM_009072	Rock2
NM_010578	Itgb1	NM_025846	Rras2
NM_010591	Jun	NM_009231	Sos1
NM_010612	Kdr	NM_011602	Tln1
NM_010681	Lama4	NM_009499	Vasp
NM_008485	Lamc2	NM_009502	Vcl

KEGG Pathway

1. [path:mmu04510](#): Focal adhesion
2. [path:mmu04910](#): Insulin signaling pathway
3. [path:mmu04520](#): Adherens junction
4. [path:mmu04010](#): MAPK signaling pathway
5. [path:mmu00530](#): Aminosugars metabolism

# Genes	p Value	Bytes Factor
34 [show]	< 0.0001	10
20 [show]	0.0005	3
12 [show]	0.005	1
26 [show]	0.005	1
6 [show]	0.01	0

Fig. S1. KEGG pathway analysis of the pattern 7 genes.

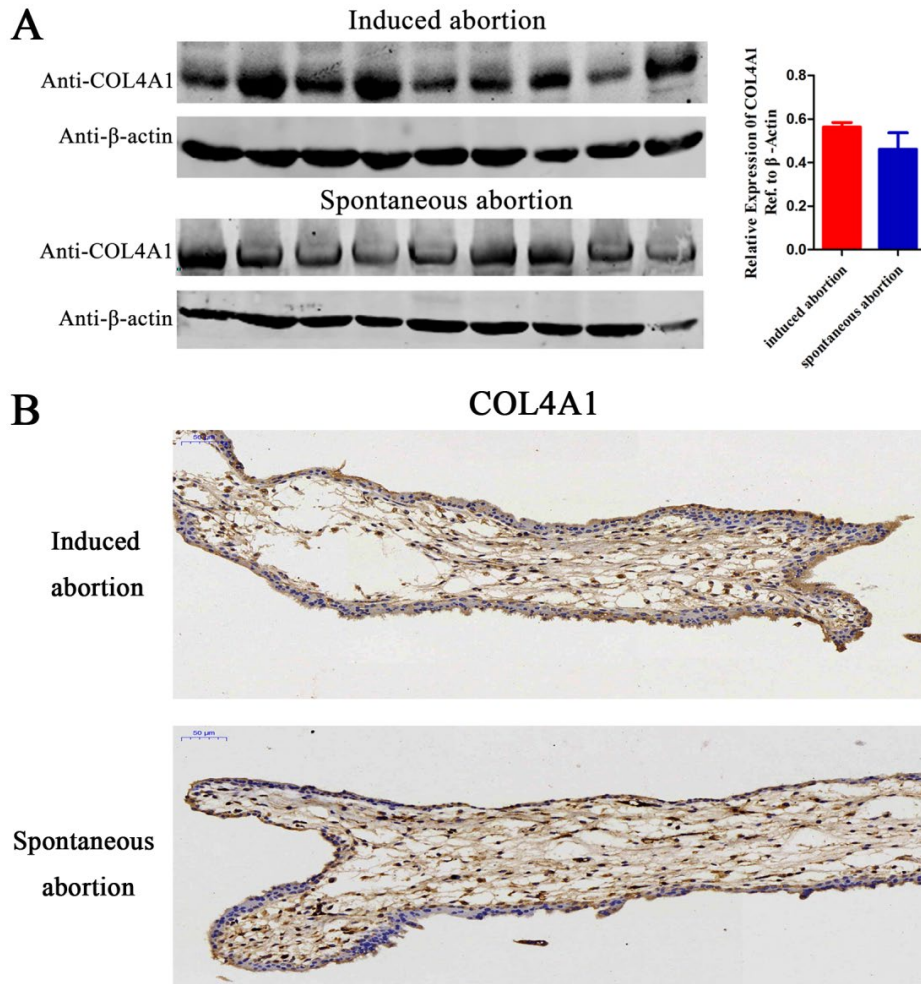


Fig. S2. Expression level of COL4A1 was analyzed by western blot and IHC. (A) Expression level of COL4A1 in human villi from early induced abortion and unexplained spontaneous abortion determined by western blot. (B) Immunohistochemistry was performed for COL4A1 expression in human villi from early induced abortion and unexplained spontaneous abortion (20 \times). Scale bars = 50 μ m.