

Supplementary Information for

Annexin A7 regulates endometrial receptivity

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Supplementary Method 1

Table S1: Patient demographics and characteristics (Figure 4d -RNA-seq).

	Age	Live Birth	Number of Losses	BMI	LH+ Day
Sub fertility	36.6 ± 1.36	0	0	24.6 ± 1.42	7.2 ± 0.13
RPL	37.5 ± 0.79	0.3± 0.15	4.9 ± 0.52	25.44 ± 1.02	7.9 ± 0.45

Data shown are arithmetic means ± SEM (n = 10 in each group)

Sub fertility; unexplained = 5; male factor = 2; tubal disease = 1; endometriosis = 1; polycystic ovary syndrome = 1.

RPL; Recurrent Pregnancy Loss

BMI; Body Mass Index

LH+; days after the luteinizing hormone peak

Table S2: Patient demographics and characteristics (Figure 4e -Western blot).

	Age	Live Birth	Number of Losses	BMI	LH+ Day
Sub fertility	35.2 ± 2.68	0	0	22.4 ± 2.07	9 ± 0.70
RPL	36.4± 3.28	0	4± 1.22	24.5± 3.10	8.2 ± 1.30

Data shown are arithmetic means ± SEM (n = 10 in each group)

Sub fertility; Unexplained = 10

RPL; Recurrent Pregnancy Loss = 10

BMI; Body Mass Index

LH+; days after the luteinizing hormone peak

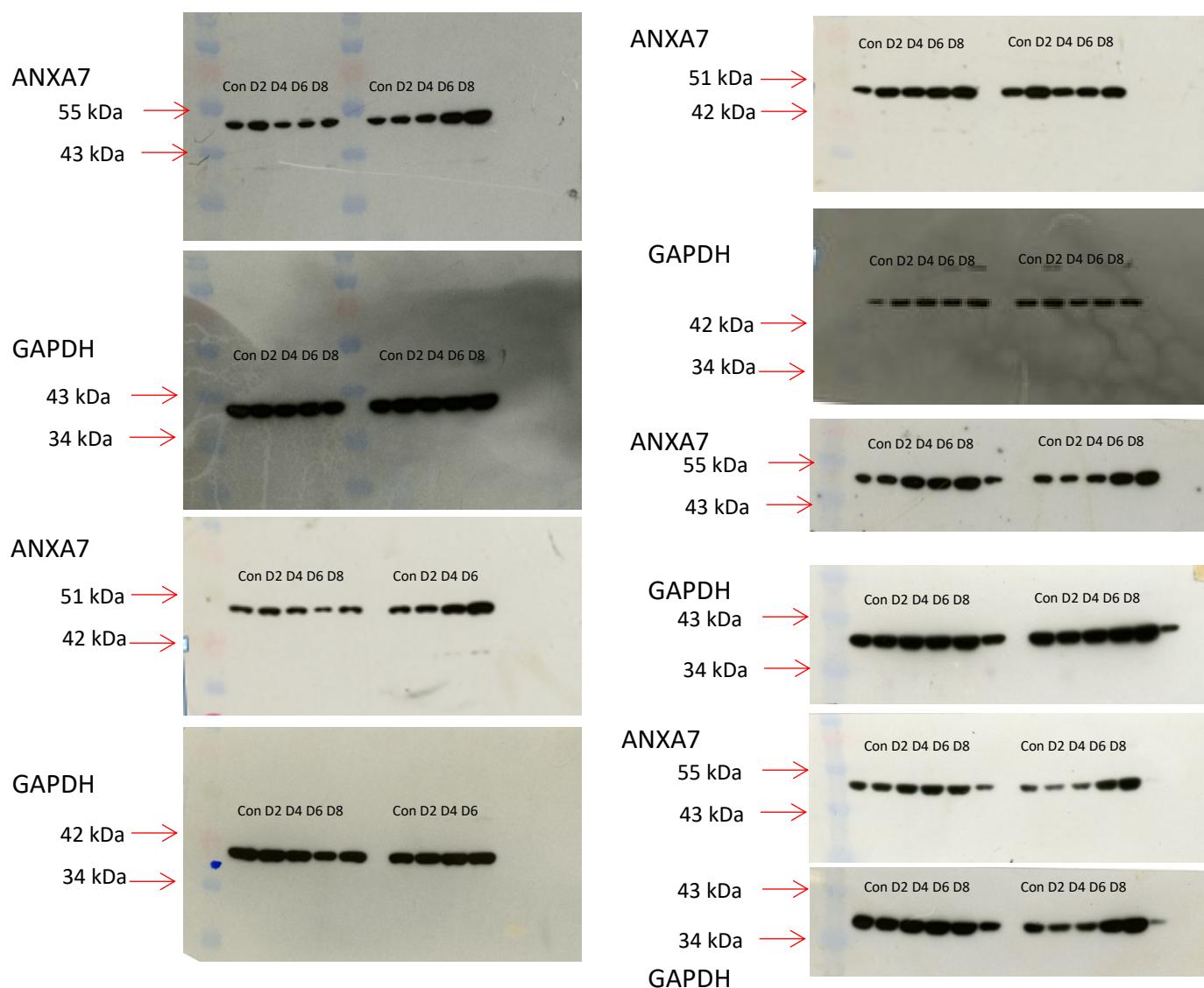


Figure Sup 1: ANXA7 level in Human Endometrial Stromal Cells (HESCs).

Original Western blot of ANXA7 (51 kDa approx.) and GAPDH (37 kDa) as shown in Figure 1c (n = 10).

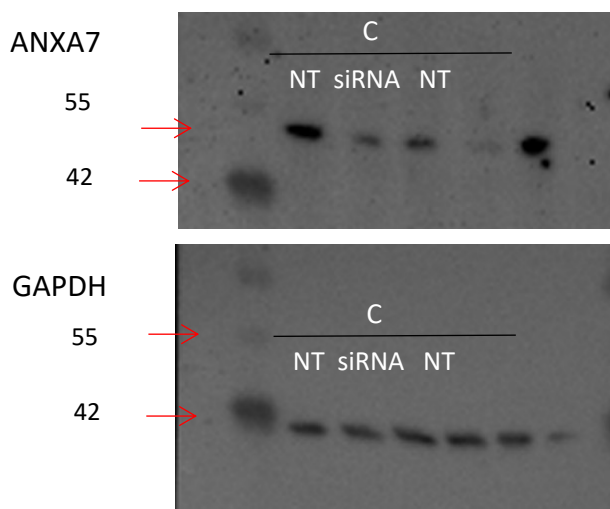
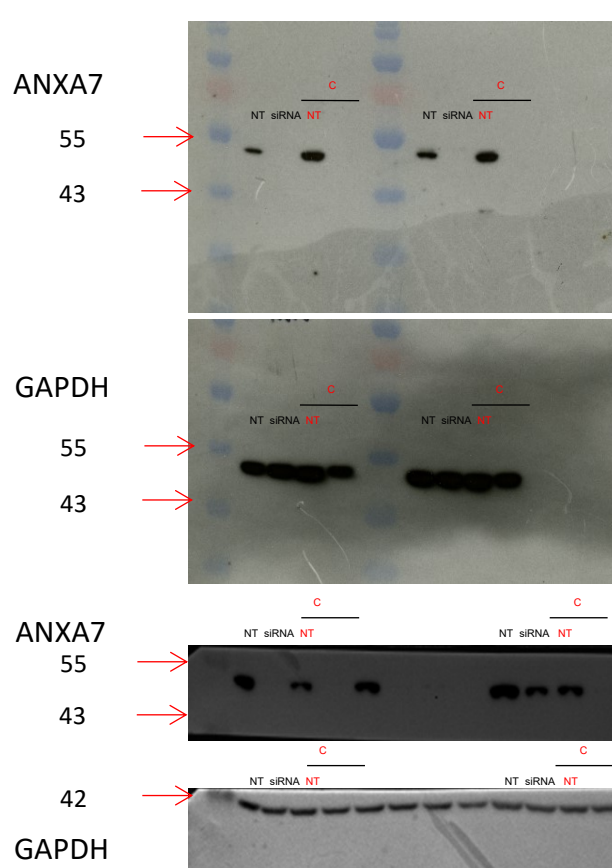
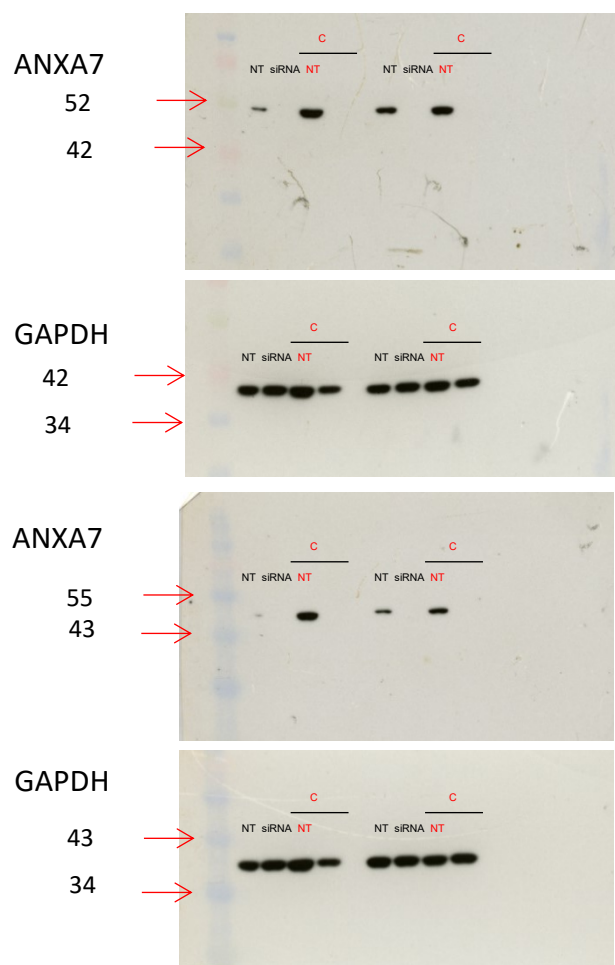


Figure Sup 2: ANXA7 Knockdown in HESCs.

Original Western blot of ANXA7 and GAPDH as shown in Figure 2b (n = 10).

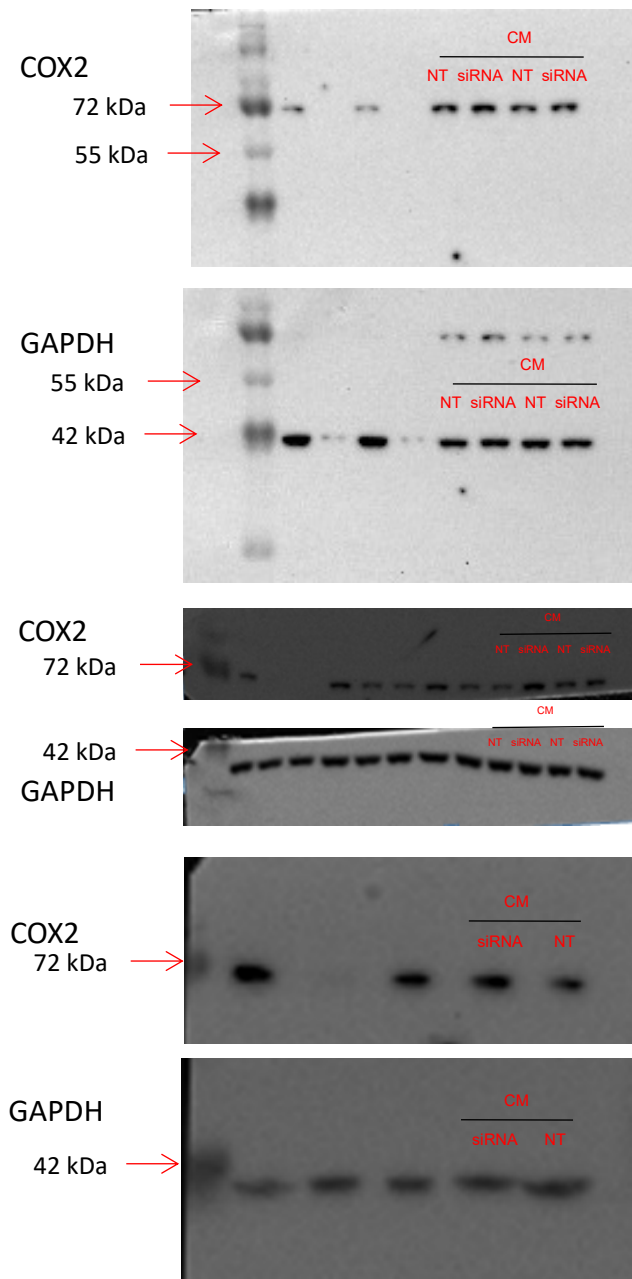


Figure Sup 3: COX2 level in ANXA7 Knockdown HESCs.

Original Western blot of Cox2 and GAPDH as shown in Figure 3b (n = 5).

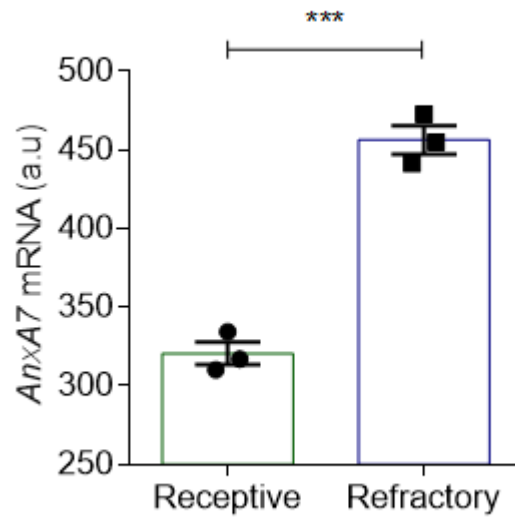


Figure Sup 4: Endometrial AnxA7 transcripts during the mouse implantation window.

Comparison of endometrial AnxA7 transcripts during the mouse implantation window. Transcript levels are expressed as arbitrary units (a.u). The data were derived from *in silico* analysis of publicly available microarray data [Gene Expression Omnibus (GEO) Profiles; ID: GSE44451]. (n = 3), ***P<0.0001 using Student's t-test.

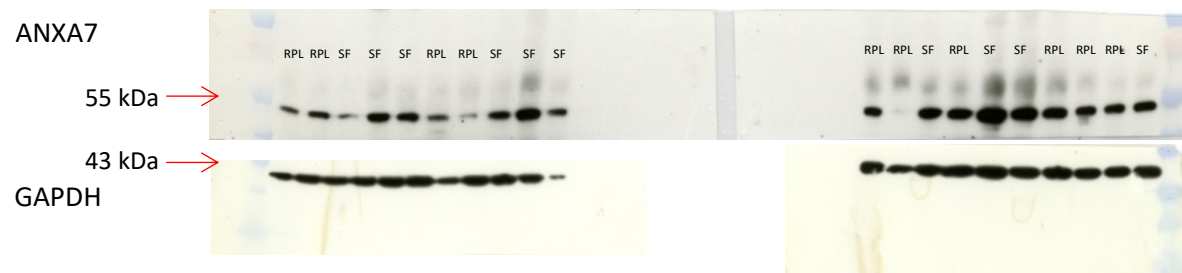


Figure Sup 5: Infertility is associated with reduced endometrial ANXA7

Original Western blot of ANXA7 expression in mid-luteal endometrial biopsies from Subfertile (SF; n = 10) and recurrent pregnancy loss patients (RPL; n = 10).

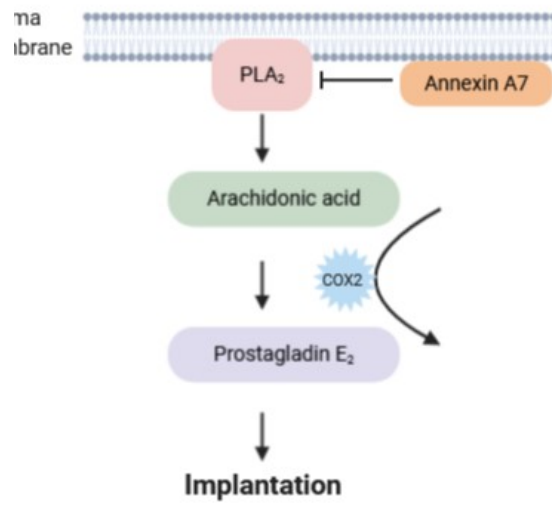


Figure S6: ANXA7 regulates embryo implantation

PLA₂ generates arachidonic acid (AA) from phospholipids. AA can then generate prostaglandin E₂ by the enzymatic activity of COX2. Here we show that the Annexin A7 inhibits the PLA₂ activity and subsequently prevents implantation.

Supplementary Method 1

Homo sapiens *ANNEXIN A7 (ANXA7)*, transcript variant 2, mRNA

NCBI Reference Sequence: NM_004034.4

ORIGIN

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Product length 71bp

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R: 3'AGG AGG ATA TCC AGG GAA AGG T 5'