Supplementary Material for Park, S. *et al.*
Uterine Development and Fertility are Dependent on Gene Dosage of the Nuclear Receptor Coregulator REA

3 Supplementary Figures and 1 Supplementary Table

Legends for Supplementary Figures

Figure S1. Genotyping PCR of REA$^{f/f}$ and REA$^{d/d}$ mice. Genomic DNA isolated from the indicated tissues was genotyped by PCR.

Figure S2. Assessment of ovarian function in REA$^{f/f}$ and REA$^{d/d}$ mice. (A) Female mice at eight weeks of age were subjected to a superovulatory dose of the gonadotropins PMSG and hGC. Oocytes were then collected from their oviducts and counted. (B) Histological assessment of ovaries in REA$^{f/f}$ and REA$^{d/d}$ mice at eight weeks of age.

Figure S3. PR and REA expression and E2-regulated gene expression in the adult uterus of REA$^{f/f}$ and REA$^{d/d}$ mice. (A) Immunochemical detection of PR and REA in the uterus of eight-week-old REA$^{f/f}$ and REA$^{d/d}$ mice. Scale bar represents 200 μm. (B) mRNA levels of E2-regulated gene expressions were monitored by qRT-PCR in the uteri of REA$^{f/f}$ and REA$^{d/d}$ mice. Six-week-old female mice were ovariectomized, and 2 weeks later, the mice were treated with vehicle or E2 for 3 days. The data are mean ± SD, and mRNA levels are presented as relative expression normalized to 36B4 by wild type. **, $P < 0.01$.

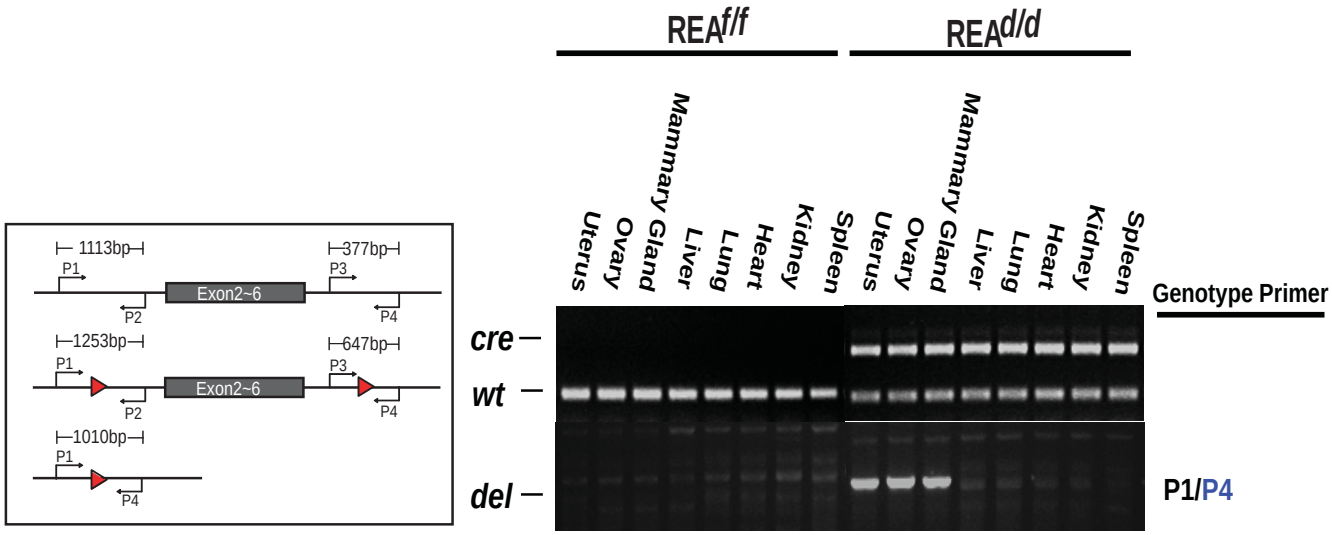
REA f/f
REA d/d
Uterus
Ovary
Mammary Gland
Liver
Lung
Heart
Kidney
Spleen
Genotype Primer
cre
wt
del
P1/P4
1113bp
377bp
P1
P3
P2
P4
Exon2~6
1253bp
647bp
1010bp

Figure S1

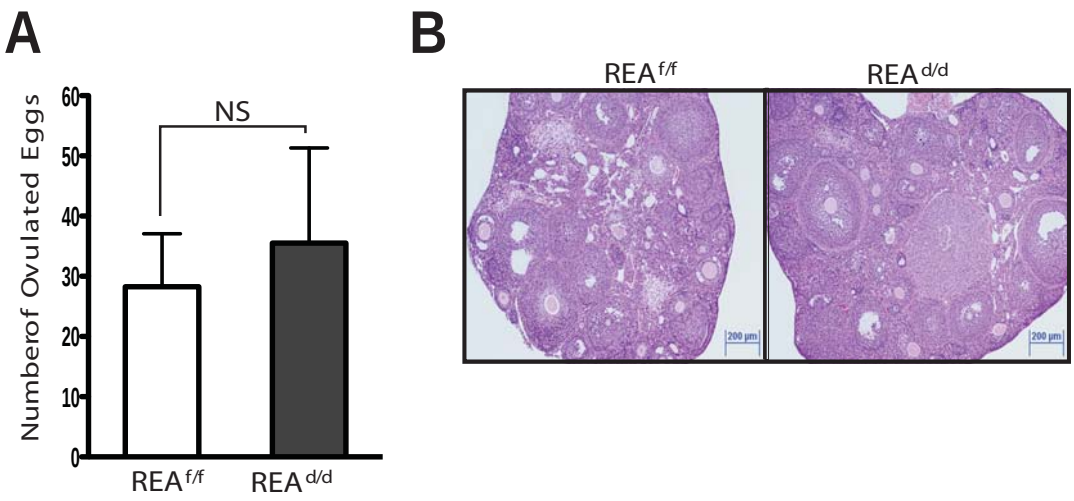
A
B
Numberof Ovulated Eggs
60
50
40
30
20
10
0
NS
REA f/f
REA d/d
REA f/f
REA d/d
200 µm
200 µm

Figure S2

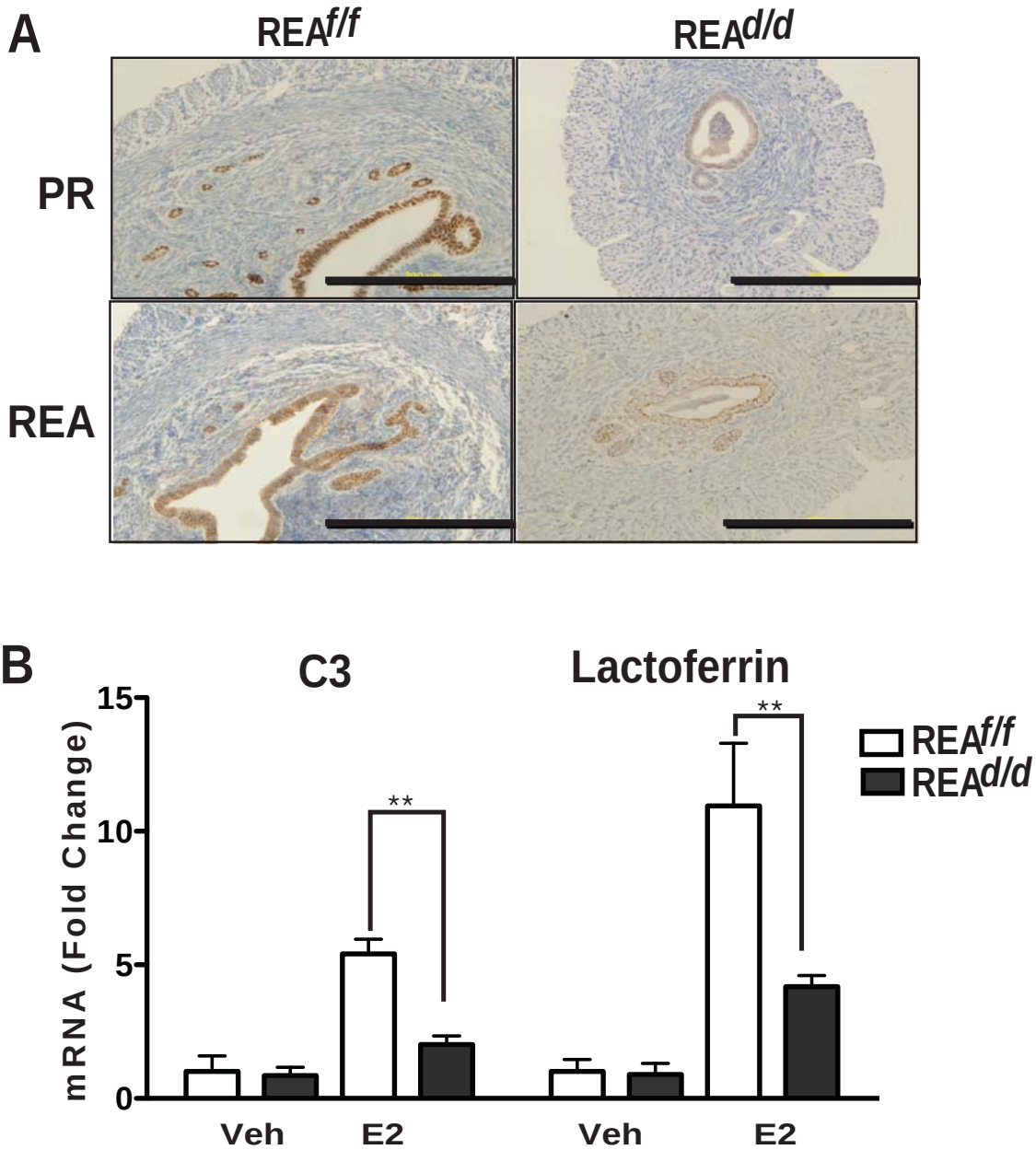
A
REA^f/f
REA^d/d
PR
REA
B
C3
Lactoferrin
mRNA (Fold Change)
15
10
5
0
**
**
REA^f/f
REA^d/d
Veh
E2
Veh
E2

Figure S3

Supplementary Table S1

List of Primers for the Genes Studied

forward (f) Primer		**reverse (r) Primer**	
REAf	AGTGCTGCCGTCCATTGTTAA	REAr	TCTTCGGATCAACAGGGACAC
PRPf	CCAGCTCATGGACCTGAACAT	PRPr	GGAGTGATCCATGCACCCATA
BMP2f	AAAGCGTCAAGCCAAACACA	BMP2r	ACCCCACATCACTGAAGTCCA
Hoxa10f	CACAGGCCACTTCGTGTTCTT	Hoxa10r	TTTGTCCGCAGCATCGTAGAG
Hoxa11f	ATTTTGATGAGCGTGGTCCCT	Hoxa11r	AGAAATCTGGACCCGAGACGT
Wnt4f	TGCCAATACCAGTTCCGGA	Wnt4r	TCACCACCTTCCCAAAGACAG
VDRf	CATCTGCATTGTCTCCCCAGA	VDRr	TTGGATAGGCGGTCCTGAAT
36B4f	CGACCTGGAAGTCCAACTAC	36B4r	ATCTGCTGCATCTGCTTG
EGFRf	TGGATGAAGAGGACATGGAGG	EGFRr	TGGACGGGCTGTTGAAGAA
HGFf	GCAAGACAATGTTTTCCAGCC	HGFr	CATGAACATCGTGGATGCCA
p21f	TTCCGCACAGGAGCAAAGT	p21r	ATGAGCGCATCGCAATCAC