

Figure S1. Specificity of Mitotracker signal in granulosa cells.

Cells were co-treated with inhibitor of complex III, antimycin for 30 min validating signal specificity. Each point represents a cell. Significantly decreased fluorescent intensity was observed in two independent experiments.

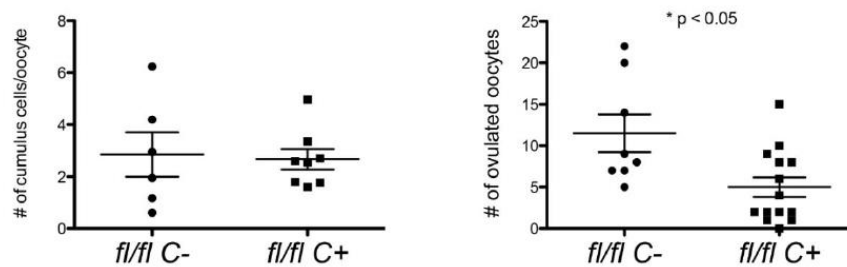


Figure S2. Cumulus cell number and ovulation rate in females with *Pdss2* deficient oocytes.

Pdss2 deficiency in oocytes due to deletion by ZP3Cre recombinase in primary follicles does not change number of cumulus cells per oocyte but leads to significant decrease of ovulation rate. Data shown are number of cells per oocyte per female (left panel) or number of total ovulated oocytes per females (right panel); genotype *Pdss2* fl/fl C (WT) and fl/fl C+ (KO).

Table 1. Primer list with qRT-PCR conditions.

Name of gene	Primer Sequence	Ref Sequence	Amplicon size	% efficiency	annealing temperature
<i>Bact</i>	cggttccgatgcctgaggctctt cgtcacacttcgatggaattga	NM_007393.5	99	100	62.5
<i>Coq2</i>	atccacagagccgaggact tcagctcgtctgtcacttc	NM_027978.2	158	94	61.5
<i>Coq4</i>	ctgactccgtcccaaga acatctcccaaacatcac	NM_178693.4	148	100	62.5
<i>Coq6</i>	ggctgctactgacctgttga aggagacactgcgttcgtg	NM_172582.3	99	94	60
<i>Coq9</i>	ctgggaggagcagcagtaga ttgtgattccagccttgtg	NM_026452.2	123	104	62.5
<i>Pdss1</i>	ttttaccagactgtgcctaag ccgaaaaacttgccaataaa	NM_019501.3	126	101	61.5
<i>Pdss2</i>	caggagagcttttggtgatg tccttctctttttgttagtg	NM_027772.2	133	99	60
<i>Ndufs3</i>	ttatggcttcgaggacatc attcttgtgccagctccact	NM_026688.2	118	94	62.5
<i>Ndufs4</i>	tgccgagtatgacgtgtctc cttgcataggtccagcgaat	NM_026610.1	155	100	62.5
<i>Uqc1</i>	tactcctgtccccaggtcac cgtaaagagaggccaagtgc	NM_018888.4	201	104	61.5
<i>BACT</i>	gcgttggttacaggaagtccttg ctatcacctcccctgtgtgga	NM_001101.4	100	99.7	60
<i>COQ2</i>	ttttctggggacagctaa ggctagttgaggccagtatga	NM_015697.8	149	89	60
<i>COQ6</i>	ctaagcagttggagctgtgt atttggtctggaaggtgctg	NM_182476.2	150	100	58
<i>COQ9</i>	cgaggaggaggaggactatga ccttctgcaatgcctct	NM_020312.4	110	95	60
<i>PDSS1</i>	atcatgcgacggttcagttt ggcgaggtaggtgtttgtt	NM_014317.4	93	105	58
<i>PDSS2</i>	ttggtggtgctccttatctct catgagtagatcccactgacc	NM_020381.3	92	104	60