

**Supplemental Table 1. Oligonucleotide primers and PCR conditions in real-time quantitative PCR**

Genes	Species	Forward primer	Reverse primer	Annealing
<i>β-1</i>	Rat	CCAGTACGGCAAGGAAGA	GAGGCTGAAGAGGATGAGGA	63°C 30s
<i>StAR</i>	Rat	GGGAGATGCCTGAGCAAAGC	GCTGGCGAACTCTATCTGGGT	63°C 30s
<i>P450scc</i>	Rat	GCTGCCTGGGATGTGATTTTC	GATGTTGGCCTGGATGTTCTTG	63°C 30s
<i>3β-HSD</i>	Rat	TCTACTGCAGCACAGTTGAC	ATACCCCTATTTTTGAGGGC	58°C 30s
<i>P450c17</i>	Rat	ACTATCCGAGAAGTGCTGCGTAT	GCTCCGAAGGGCAAGTAACTC	62°C 30s
<i>17β-HSD1</i>	Rat	CGTGGTTATGAGCAAGCCCT	AAGCGGTTTGTGGAGAAGTAGC	60°C 30s
<i>17β-HSD2</i>	Rat	CAAGACAAAGGACTGTGGGCT	GCAGAAACACCTTGGTGACCT	62°C 30s
<i>P450arom</i>	Rat	ATGGGCCCTCCTTCTCTGAT	CAGGCACTTCCAATCCCCAT	60°C 30s
<i>Igf1</i>	Rat	GACCAAGGGGCTTTTACTTCAAC	TTTGTAGGCTTCAGCGGAGCAC	60°C 30s
<i>Igf1r</i>	Rat	GTCCTTCGGGATGGTCTA	TGGCCTTGGGATACTACAC	62°C 30s
<i>Akt1</i>	Rat	ATGAGCGACGTGGCTATTGTGA AG	GAGGCCGTCAGCCACAGTCTG GATG	60°C 30s
<i>Akt2</i>	Rat	GGGCGTGGTCATGTACGAGAT	CTGCCAGTTGATGCTGAGGAA	60°C 30s
<i>GnRH</i>	Rat	GATATTGTTAGCGGTTCCCTGTG	AACCAGGCTGTCGTCTAA	60°C 30s
<i>Kiss-1</i>	Rat	GTTTCCCTGATGAGAAGAAGTG	GTGGACAGCAGGACAGATA	60°C 30s
<i>Fshr</i>	Rat	GCGTGGCAACCTTTATCT	GCACACGTTCCCGTTTAT	60°C 30s
<i>Gapdh</i>	Rat	GCAAGTTCAATGGCACAG	GCCAGTAGACTCCACGACA	63°C 30s
<i>P450scc</i>	Human	TCCGTCTGTTCAGGACCAAG	GTGCCATCTCATAACAAGTGCC	60°C 30s
<i>P450arom</i>	Human	CAGCCTGTCTGTTGACTTGGT	GGCGATGTACTTTCTCTGCACA	60°C 30s
<i>IGF1</i>	Human	GCTGGTGGATGCTCTTCAGTT	GCACTCCCTCTACTTGGGTTT	60°C 30s
<i>IGF1R</i>	Human	TGTATGCCTCTGTGAACCCG	TAGACCATCCCAAACGACCC	60°C 30s
<i>AKT1</i>	Human	TTCTATGGCGCTGAGATTGTGT	GCCGTAGTCATTGTCTCCAG	60°C 30s
<i>AKT2</i>	Human	TCTACAACCAGGACCACGAGC	GACCTGAGGTTTGAAGGGTGG	60°C 30s
<i>GAPDH</i>	Human	CATCATCCCTGCCTCTACTGG	GTGGGTGTCGCTGTTGAAGTC	60°C 30s

*Sf-1*: steroidogenic factor 1; *StAR*: steroidogenic acute regulatory protein; *P450scc*: cytochrome P450 cholesterol side chain cleavage; *3 $\beta$ -HSD*: 3 $\beta$ -hydroxysteroid dehydrogenase; *P450c17*: steroid 17-hydroxylase; *17 $\beta$ -HSD1/2*: 17 $\beta$ -hydroxysteroid dehydrogenase type 1/2; *P450arom*: cytochrome P450 aromatase; *Igf1*: insulin-like growth factor 1; *Igf1r*: insulin-like growth factor 1 receptor; *Akt1/2*: protein kinase B1/2; *GnRH*: gonadotropin releasing hormone; *Kiss-1*: Kisspeptin-1; *Fshr*: follicle-stimulating hormone receptor; *Gapdh*: glyceraldehyde 3-phosphate dehydrogenase.