**Lefevre et al., Supplemental Table S1.** Genes selected for PCR array analysis and specific to ovarian functions.

| Gene Symbol | Gene Name | RefSeq NB | Taqman Assay |
|---|---|---|---|
| Ar | androgen receptor | NM_012502 | Rn00560747_m1 |
| Arh | aryl hydrocarbon receptor | NM_013149 | Rn00565750_m1 |
| Arnt | aryl hydrocarbon receptor nuclear translocator | NM_012780 | Rn00562847_m1 |
| Bax | Bcl2-associated X protein | NM_017059 | Rn02532082_g1 |
| Bcl2 | B-cell CLL/lymphoma 2 | NM_016993 | Rn99999125_m1 |
| Bmp4 | bone morphogenetic protein 4 | NM_012827 | Rn00432087_m1 |
| Bmp7 | bone morphogenetic protein 7 | NM_001191856 | Rn01528889_m1 |
| Casp2 | caspase 2 | NM_022522 | Rn00574684_m1 |
| Ccnd2 | cyclin D2 | NM_022267 | Rn03020897_m1 |
| Cmklr1 | chemokine-like receptor 1 | NM_022218 | Rn00573616_s1 |
| Cx43 | gap junction protein, alpha 1 | NM_012567 | Rn01433957_m1 |
| Cyp11a1 | cytochrome P450, family 11, subfamily a, polypeptide 1 | NM_017286 | Rn00568733_m1 |
| Cyp17a1 | cytochrome P450, family 17, subfamily a, polypeptide 1 | NM_012753 | Rn00562601_m1 |
| Cyp19 | aromatase | NM_017085 | Rn01422546_m1 |
| Esr1 | estrogen receptor 1 (ER alpha) | NM_012689 | Rn01640372_m1 |
| Esr2 | estrogen receptor 2 (ER beta) | NM_012754 | Rn00562610_m1 |
| Foxo3a | forkhead box O3 | NM_001106395 | Rn01441087_m1 |
| Fshr | follicle stimulating hormone receptor | NM_199237 | Rn01648507_m1 |
| Gdf9 | growth differentiation factor 9 | NM_021672 | Rn00572328_m1 |
| Gzma | granzyme A | NM_153468 | Rn00596401_m1 |
| Gzmb | granzyme B | NM_138517 | Rn00821752_g1 |
| Hsd17β1 | hydroxysteroid (17-beta) dehydrogenase 1 | NM_012851 | Rn00563388_g1 |
| Hsd3β1 | hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1 | NM_001007719 | Rn01774741_m1 |
| Igf1 | insulin-like growth factor | NM_178866 | Rn00710306_m1 |
| Insl3 | insulin-like 3 | NM_053680 | Rn00586632_m1 |
| Kitlg | KIT ligand | NM_021843 | Rn01502851_m1 |
| Lfng | O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase | NM_133393 | Rn00591325_m1 |
| Lhcgr | luteinizing hormone/choriogonadotropin receptor | NM_012978 | Rn00564309_m1 |
| Mis | anti-Mullerian Hormone | NM_012902 | Rn00563731_g1 |
| Ngf | nerve growth factor (beta polypeptide) | XM_227525 | Rn01533872_m1 |
| Notch2 | notch 2 | NM_024358 | Rn01534371_m1 |
| Nr3c1 | nuclear receptor subfamily 3, group C, member 1 | NM_012576 | Rn00561369_m1 |
| Ppia | peptidylprolyl isomerase A (cyclophilin A) | NM_017101 | Rn00690933_m1 |
| Prlr | prolactin receptor | NM_012630 | Rn01525459_m1 |
| Pten | phosphatase and tensin homolog deleted on chr ten | NM_031606 | Rn00477208_m1 |
| Ptgs2 | prostaglandin-endoperoxide synthase 2 | NM_017232 | Rn01483828_m1 |

**Lefevre et al., Supplemental Table S1.** *Continued***:** Genes selected for PCR array analysis and specific to ovarian functions.

| Gene Symbol | Gene Name | RefSeq NB | Taqman Assay |
|---|---|---|---|
| *Rarres2* | retinoic acid receptor responder 2 | NM_001013427 | Rn01451853_m1 |
| *Rxfp2* | relaxin/insulin-like family peptide receptor 2 | NM_001012475 | Rn01412901_m1 |
| *Sohlh1* | spermatogenesis and oogenesis specific basic helix-loop-helix 1 | NM_001191852.1 | Rn04280363_g1 |
| *Spp1* | secreted phosphoprotein 1 | NM_012881 | Rn01449972_m1 |
| *Srd5a1* | steroid-5-alpha-reductase, alpha polypeptide 1 | NM_017070 | Rn00567064_m1 |
| *Srd5a2* | steroid-5-alpha-reductase, alpha polypeptide 2 | NM_022711 | Rn00575595_m1 |
| *Star* | steroidogenic acute regulatory protein | NM_031558 | Rn00580695_m1 |
| *Tspo* | translocator protein | NM_012515 | Rn00560892_m1 |

**Lefevre et al., Supplemental Table S2.** Fold change in gene expression relative to *Ppia* expression and the control group.

| Gene symbol | Gene name | Fold change relative to control | | | | p value |
|---|---|---|---|---|---|---|
| | | 0 | 0.06 | 20 | 60 | |
| Rxfp2 | relaxin/insulin-like family peptide receptor 2 | 1.00 | 0.76 | 0.92 | 0.46 | 0.11 |
| Spp1 | secreted phosphoprotein 1 | 1.00 | 0.70 | 1.25 | 1.39 | 0.12 |
| Ptgs2 | prostaglandin-endoperoxide synthase 2 | 1.00 | 0.80 | 0.62 | 0.63 | 0.15 |
| Rarres2 | retinoic acid receptor responder 2 | 1.00 | 0.88 | 0.89 | 0.82 | 0.19 |
| Lhcgr | luteinizing hormone/choriogonadotropin receptor | 1.00 | 0.68 | 1.07 | 0.92 | 0.20 |
| Tspo | translocator protein | 1.00 | 1.22 | 0.96 | 1.04 | 0.27 |
| Esr1 | estrogen receptor 1 (ER alpha) | 1.00 | 0.83 | 0.94 | 0.86 | 0.27 |
| Cmklr1 | chemokine-like receptor 1 | 1.00 | 1.30 | 0.99 | 1.05 | 0.28 |
| Bmp7 | bone morphogenetic protein 7 | 1.00 | 0.74 | 1.07 | 0.78 | 0.32 |
| Cyp11a1 | cytochrome P450, family 11, subfamily a, polypeptide 1 | 1.00 | 1.20 | 1.05 | 1.22 | 0.34 |
| Cat | catalase | 1.00 | 1.30 | 1.02 | 1.15 | 0.38 |
| Gzmb | granzyme B | 1.00 | 0.62 | 0.73 | 0.84 | 0.41 |
| Hsd17β1 | hydroxysteroid (17-beta) dehydrogenase 1 | 1.00 | 1.14 | 1.07 | 1.16 | 0.43 |
| Gdf9 | growth differentiation factor 9 | 1.00 | 0.62 | 0.93 | 0.96 | 0.44 |
| Sod1 | superoxide dismutase 1 | 1.00 | 1.07 | 1.11 | 1.12 | 0.45 |
| Ngf | nerve growth factor (beta polypeptide) | 1.00 | 0.91 | 0.87 | 0.80 | 0.47 |
| Casp2 | caspase 2 | 1.00 | 0.91 | 1.00 | 0.98 | 0.48 |
| Arh | aryl hydrocarbon receptor | 1.00 | 1.15 | 0.96 | 1.04 | 0.59 |
| Bmp4 | bone morphogenetic protein 4 | 1.00 | 1.08 | 0.88 | 0.82 | 0.60 |
| Bax | bcl2-associated X protein | 1.00 | 0.91 | 0.95 | 0.88 | 0.60 |
| Srd5a1 | steroid-5-alpha-reductase, alpha polypeptide 1 | 1.00 | 0.82 | 0.76 | 0.80 | 0.62 |
| Cx43 | gap junction protein, alpha 1 | 1.00 | 1.07 | 1.00 | 0.87 | 0.65 |
| Cyp19 | aromatase | 1.00 | 1.19 | 1.12 | 1.25 | 0.68 |
| Fshr | follicle stimulating hormone receptor | 1.00 | 0.91 | 1.09 | 0.86 | 0.73 |
| Lfng | O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase | 1.00 | 0.90 | 0.88 | 0.89 | 0.74 |
| Igf1 | insulin-like growth factor | 1.00 | 0.91 | 1.08 | 0.94 | 0.76 |
| Mis | anti-Mullerian Hormone | 1.00 | 0.75 | 0.86 | 0.93 | 0.76 |
| Hsd3β1 | hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1 | 1.00 | 1.15 | 1.10 | 1.16 | 0.77 |
| Foxo3a | forkhead box O3 | 1.00 | 0.87 | 0.96 | 0.96 | 0.78 |
| Esr2 | estrogen receptor 2 (ER beta) | 1.00 | 0.90 | 1.01 | 0.91 | 0.78 |
| Ar | androgen receptor | 1.00 | 0.92 | 0.93 | 0.97 | 0.80 |

**Lefevre et al., Supplemental Table S2.** *Continued***:** Fold change in gene expression relative to *Ppia* expression and the control group.

| Gene symbol | Gene name | Fold change relative to control | | | | p value |
|---|---|---|---|---|---|---|
| | | **0** | **0.06** | **20** | **60** | |
| Bcl2 | B-cell CLL/lymphoma 2 | 1.00 | 0.88 | 0.93 | 0.90 | *0.81* |
| Arnt | aryl hydrocarbon receptor nuclear translocator | 1.00 | 0.92 | 0.94 | 0.94 | *0.82* |
| Notch2 | notch 2 | 1.00 | 0.91 | 0.98 | 0.90 | *0.84* |
| Ccnd2 | cyclin D2 | 1.00 | 1.03 | 0.98 | 1.03 | *0.88* |
| Star | steroidogenic acute regulatory protein | 1.00 | 1.00 | 1.12 | 1.06 | *0.90* |
| Nr3c1 | nuclear receptor subfamily 3, group C, member 1 | 1.00 | 0.96 | 0.97 | 0.96 | *0.90* |
| Gzma | granzyme A | 1.00 | 1.00 | 0.84 | 0.93 | *0.93* |
| Kitlg | KIT ligand | 1.00 | 0.94 | 0.91 | 0.91 | *0.93* |
| Pten | phosphatase and tensin homolog deleted on chr ten | 1.00 | 1.03 | 1.00 | 0.99 | *1.00* |
| Prlr | prolactin receptor | 1.00 | 1.02 | 0.99 | 1.00 | *1.00* |
| Sohlh1 | spermatogenesis and oogenesis specific basic helix-loop-helix 1 | 1.00 | 1.00 | 1.00 | 1.01 | *1.00* |

**Lefevre et al., Supplemental Table S3. Reproductive Parameters (adapted from [29]).**

| Parameter | Nominal BFR Mixture Dose (mg/kg/day) | | | |
| --- | --- | --- | --- | --- |
| | Control (0) | 0.06 | 20 | 60 |
| Estrous cycle length - days | 4.8 ± 0.4 (31) | 4.6 ± 0.3 (29) | 4.7 ± 0.2 (29) | 5.6 ± 0.6 (29) |
| Mating Index [a] | 70.4 (27) | 85.2 (27) | 75.0 (24) | 70.8 (24) |
| Fecundity index [b] | 79.0 (15) | 91.3 (21) | 94.4 (17) | 100.0 (17) |
| Number of live fetuses per litter | 17.0 ± 0.3 (15) | 17.4 ± 0.4 (21) | 16.8 ± 0.80 (17) | 16.7 ± 0.9 (17) |
| Mean placental weights (mg) | 477.0 ± 10.5 | 470.4 ± 9.6 | 464.6 ± 14.2 | 494.4 ± 21.7 |

*Values are expressed as means ± SEM with the total number of observations in parentheses.*

[a]*Mating index = (number of sperm positive females / number of mated females) x 100.*

[b]*Fecundity index = (number of pregnant females / number of sperm positive females) x 100.*