**SUPPLEMENTARY MATERIAL**

**OOCYTE-MEDIATED EFFECT OF SEROTONIN ON THE FUNCTIONAL STATUS OF GRANULOSA CELLS**

**Nikishin D.A., Khramova Y.V., Alyoshina N.M., Malchenko L.A., Shmukler Y.B.**

**Table S1.** Specific oligonucleotides used for real-time PCR.

|  |  |  |  |
| --- | --- | --- | --- |
| Gene name | NCBI Gene ID | Forward primers sequences (5`→3`) | Reverse primers sequences (5`→3`) |
| Markers of the functional state of granulosa cells | | | |
| *Bad* | 12015 | CCGAAGGATGAGCGATGAGT | CCGGGATGTGGAGCAGAA |
| *Bax* | 12028 | TGGCTGGGGAGACACCTG | GCCACCCGGAAGAAGACC |
| *Bcl2* | 12043 | CAACGGGGAAACACCAGAA | ACGGCCCCGAAAGAAAA |
| *Casp3* | 12367 | AGATACCGGTGGAGGCTGAC | TTAACGCGAGTGAGAATGTGC |
| *Ccna1* | 12427 | AAATTGCAGCTTGTCGGGAC | ATTGGTTGGTGGTTGGAACG |
| *Ccnb1* | 268697 | GCTGACCCAAACCTCTGTAGTG | ATGGTCTCCTGAAGCAGCCTA |
| *Ccnd1* | 12443 | GACACCAATCTCCTCAACGACC | GGCCACGATTTTCCGCATG |
| *Ccnd2* | 12444 | GGCGTGTTCGTCATCTGCTA | AACTATACGGCCTTTTCCTCTCA |
| *Ccne1* | 12447 | TCAGTCCGCTCCAGAAAAAG | TAGGGGTGGGGATGAAAGAG |
| *Cyp11a1* | 13070 | GCCTGGAGCCATCAAGAACT | GAAAAGCGGAATAGGTCATCACT |
| *Cyp17a1* | 13074 | CGGTGGCCCCCTTGCTCA | GGCTGGTCCCATTCATTTTTATCGTG |
| *Cyp19a1* | 13075 | TCTCCTCATCAAACCAAACATCTTCT | CAGTTGCAAAATCCATACAGTCTTCC |
| *Foxo3* | 56484 | TCCCGCCAGCCAGTCTA | AATCCAACCCGTCAGCATC |
| *Fshr* | 14309 | TGCTACACCCACATCTACCTCACA | GGATCTTGGCCTTGGACACAGT |
| *Has2* | 15117 | GCGGAAGAAGGGACAACA | TGCGGTGCCACAATACTG |
| *Igfbp4* | 16010 | GAAAGGAATGGGGTGAGGAAG | GGTGGTGGGCAACTAGAAAGATA |
| *Ihh* | 16147 | CAACTACAATCCCGACATCATCTT | TCACCCGCAGTTTCACACC |
| *Lhcgr* | 16867 | CTCTCACCTATCTCCCTGTCAAAGTAA | TGTAAAAGCACCGGGTTCAATGT |
| *Mki67* | 17345 | CGGGATAAAGAAAAACGAGAAG | TTGGCCCCGAGATGTAGATT |
| *Trp53* | 22059 | CCCGTCCCCATCACCAG | GGGCCAGGAACCACTACTCA |
| *Pcna* | 18538 | CCGAGACCTTAGCCACATTG | GTTACCGCCTCCTCTTCTTTATC |
| *Ptgfr* | 19220 | AAGTTCAGAAGCCAGCAGCATA | CGGAGAGCAAAAAGTGTCGTT |
| *Ptgs2* | 19225 | CCCTCCGGTGTTTGTCCTT | CCTGCAGCATTTTTCATCTTGTA |
| *Star* | 20845 | GCCCACTTTTCTGTCCCTTAT | CTGCCCTCGCTCACCTTA |
| Oocyte-derived growth factors | | | |
| *Bmp6* | 12161 | ACCGTACTTTGTGGCAGAGC | GAAAAGGCAAAGAGCAGAGTTAG |
| *Bmp15* | 12155 | GAATCTGATGCCTCTTGTCCTT | ATGGCATGGTTGGGTGAAT |
| *Gdf9* | 14566 | GCCTCCCCGACCTTTAGA | TGCCTCAGACTCCACATTTTC |
| *Igf1* | 16000 | GACCGAGGGGCTTTTACTTCAACA | GGCGCTGGGCACGGATAG |
| Reference gene | | | |
| *Rps18* | 20084 | AAGAAAATTCGAGCCCATAGAGG | TAACAGCAAAGGCCCAGAGACT |

**ДОПОЛНИТЕЛЬНЫЕ МАТЕРИАЛЫ**

**ОПОСРЕДОВАННОЕ ООЦИТОМ ВЛИЯНИЕ СЕРОТОНИНА НА ФУНКЦИОНАЛЬНЫЙ СТАТУС КЛЕТОК ГРАНУЛЕЗЫ**

**Никишин Д.А., Храмова Ю.В., Алешина Н.М., Мальченко Л.А., Шмуклер Ю.Б**

**Таблица S1.** Специфические олигонуклеотиды, использованные для проведения ПЦР в реальном времени.

|  |  |  |  |
| --- | --- | --- | --- |
| Название гена | NCBI Gene ID | Последовательности прямых праймеров (5`→3`) | Последовательности обратных праймеров (5`→3`) |
| Маркеры функционального состояния клеток гранулезы | | | |
| *Bad* | 12015 | CCGAAGGATGAGCGATGAGT | CCGGGATGTGGAGCAGAA |
| *Bax* | 12028 | TGGCTGGGGAGACACCTG | GCCACCCGGAAGAAGACC |
| *Bcl2* | 12043 | CAACGGGGAAACACCAGAA | ACGGCCCCGAAAGAAAA |
| *Casp3* | 12367 | AGATACCGGTGGAGGCTGAC | TTAACGCGAGTGAGAATGTGC |
| *Ccna1* | 12427 | AAATTGCAGCTTGTCGGGAC | ATTGGTTGGTGGTTGGAACG |
| *Ccnb1* | 268697 | GCTGACCCAAACCTCTGTAGTG | ATGGTCTCCTGAAGCAGCCTA |
| *Ccnd1* | 12443 | GACACCAATCTCCTCAACGACC | GGCCACGATTTTCCGCATG |
| *Ccnd2* | 12444 | GGCGTGTTCGTCATCTGCTA | AACTATACGGCCTTTTCCTCTCA |
| *Ccne1* | 12447 | TCAGTCCGCTCCAGAAAAAG | TAGGGGTGGGGATGAAAGAG |
| *Cyp11a1* | 13070 | GCCTGGAGCCATCAAGAACT | GAAAAGCGGAATAGGTCATCACT |
| *Cyp17a1* | 13074 | CGGTGGCCCCCTTGCTCA | GGCTGGTCCCATTCATTTTTATCGTG |
| *Cyp19a1* | 13075 | TCTCCTCATCAAACCAAACATCTTCT | CAGTTGCAAAATCCATACAGTCTTCC |
| *Foxo3* | 56484 | TCCCGCCAGCCAGTCTA | AATCCAACCCGTCAGCATC |
| *Fshr* | 14309 | TGCTACACCCACATCTACCTCACA | GGATCTTGGCCTTGGACACAGT |
| *Has2* | 15117 | GCGGAAGAAGGGACAACA | TGCGGTGCCACAATACTG |
| *Igfbp4* | 16010 | GAAAGGAATGGGGTGAGGAAG | GGTGGTGGGCAACTAGAAAGATA |
| *Ihh* | 16147 | CAACTACAATCCCGACATCATCTT | TCACCCGCAGTTTCACACC |
| *Lhcgr* | 16867 | CTCTCACCTATCTCCCTGTCAAAGTAA | TGTAAAAGCACCGGGTTCAATGT |
| *Mki67* | 17345 | CGGGATAAAGAAAAACGAGAAG | TTGGCCCCGAGATGTAGATT |
| *Trp53* | 22059 | CCCGTCCCCATCACCAG | GGGCCAGGAACCACTACTCA |
| *Pcna* | 18538 | CCGAGACCTTAGCCACATTG | GTTACCGCCTCCTCTTCTTTATC |
| *Ptgfr* | 19220 | AAGTTCAGAAGCCAGCAGCATA | CGGAGAGCAAAAAGTGTCGTT |
| *Ptgs2* | 19225 | CCCTCCGGTGTTTGTCCTT | CCTGCAGCATTTTTCATCTTGTA |
| *Star* | 20845 | GCCCACTTTTCTGTCCCTTAT | CTGCCCTCGCTCACCTTA |
| Ооцитарные факторы роста | | | |
| *Bmp6* | 12161 | ACCGTACTTTGTGGCAGAGC | GAAAAGGCAAAGAGCAGAGTTAG |
| *Bmp15* | 12155 | GAATCTGATGCCTCTTGTCCTT | ATGGCATGGTTGGGTGAAT |
| *Gdf9* | 14566 | GCCTCCCCGACCTTTAGA | TGCCTCAGACTCCACATTTTC |
| *Igf1* | 16000 | GACCGAGGGGCTTTTACTTCAACA | GGCGCTGGGCACGGATAG |
| Референсный ген | | | |
| *Rps18* | 20084 | AAGAAAATTCGAGCCCATAGAGG | TAACAGCAAAGGCCCAGAGACT |