**Supplementary Materials:**

|  |
| --- |
| **Supplementary file 1A** **Characteristics of patients.** |
|  | **Age****(Years)** | **G/P** | **Ethnicity** | **Gestational weeks** | **Days after ovalution** | **Embryo chromosome test** |
| **RPL** | 31 | 4/1 | HAN/CHINESE | 7+3 | 38 | NEG |
|  | 25 | 2/0 | HAN/CHINESE | 6+4 | 37 | NEG |
|  | 26 | 3/0 | HAN/CHINESE | 8+6 | 30 | NEG |
|  | 35 | 5/1 | HAN/CHINESE | 8+2 | 37 | NEG |
|  | 27 | 2/0 | HAN/CHINESE | 9 | 30 | NEG |
|  | 32 | 4/0 | HAN/CHINESE | 7+1 | 32 | NEG |
|  | 31 | 3/0 | HAN/CHINESE | 6+6 | 33 | NEG |
|  | 34 | 5/1 | HAN/CHINESE | 7+2 | 45 | NEG |
|  | 25 | 3/0 | HAN/CHINESE | 6+3 | 31 | NEG |
|  | 30 | 3/0 | HAN/CHINESE | 6+5 | 32 | NEG |
|  | 28 | 3/0 | HAN/CHINESE | 5+4 | 27 | NEG |
|  | 35 | 5/2 | HAN/CHINESE | 7+3 | 44 | NEG |
|  | 27 | 3/0 | HAN/CHINESE | 6+4 | 37 | NEG |
|  |  |  |  |  |  |  |
| **NOR** | 31 | 3/0 | HAN/CHINESE | 6+5 | 33 | NEG |
|  | 35 | 2/1 | HAN/CHINESE | 7+3 | 35 | NEG |
|  | 26 | 2/1 | HAN/CHINESE | 8+2 | 47 | NEG |
|  | 29 | 4/2 | HAN/CHINESE | 8+2 | 41 | NEG |
|  | 29 | 4/0 | HAN/CHINESE | 8+5 | 45 | NEG |
|  | 27 | 3/0 | HAN/CHINESE | 6+3 | 27 | NEG |
|  | 28 | 3/0 | HAN/CHINESE | 7+2 | 37 | NEG |
|  | 35 | 4/2 | HAN/CHINESE | 8+4 | 47 | NEG |
|  | 32 | 2/0 | HAN/CHINESE | 6+6 | 34 | NEG |
|  | 30 | 1/0 | HAN/CHINESE | 7+3 | 36 | NEG |
|  | 24 | 3/0 | HAN/CHINESE | 7+1 | 37 | NEG |
|  | 29 | 2/1 | HAN/CHINESE | 6+6 | 32 | NEG |
|  | 25 | 2/0 | HAN/CHINESE | 6+2 | 31 | NEG |

RPL, recurrent pregnancy loss. NOR, normal pregnancy. G/P, time of gravida / time of para. NEG, negative.

|  |
| --- |
| **Supplementary file 1B****Inhibitors or activators used in the study.** |
| **Kinase** | **Inhibitor or activator** | **Company** | **Catalog number** | **Working concentration** |
| PKC | Phorbol 12-myristate 13-acetate (PMA) | MCE | HY-18739 | 2 nM |
| NFκB | pyrrolidinedithiocarbamate ammonium (PDTC) | MCE | HY-18738 | 10 uM |
| PKD/PKCμ | CID755673 | MCE | HY-12239 | 50 uM |
| HDAC5 | LMK235 | MCE | HY-18998 | 2 uM |

|  |
| --- |
| **Supplementary file 1**C **Primer sequences (all 5’ to 3’) used in quantitative RT-PCR analysis of target genes.****qRT-PCR primer** |
| Abbrevia-tion | Gene | Forward primer | Reverse primer |
| GNAQ | Guanine nucleotide-binding protein G(q) subunit alpha | GTTGATGTGGAAGAAGGTGTCTA | GTAGGCAGGTAGGCAGGGT |
| PRL | Prolactin | CTACATCCATAACCTCTCCTCAG | GGGCTTGCTCCTTGTCTTC |
| IGFBP-1 | Insulin-like growth factor binding protein-1 | AGAGTCGTAGAGAGTTTAGC | ACACTGTCTGCTGTGATAA |
| IL-11 | Interleukin-11 | CTCATCTTCTTCACCATT | ACTTCCTACTTCCTACAT |
| IL-6 | Interleukin-6 | CTTTTGGAGTTTGAGGTATACCTAG | CGCAGAATGAGATGAGTTGTC |
| IL-1β | Interleukin-1 beta | ATGGCTTATTACAGTGGCA | GTAGTGGTGGTCGGAGATT |
| IL-1R 1 | Interleukin-1 receptor 1 | CTTCCTCTCCAGCCTTCT | GGACCGTTATTGACCTGAA |
| IL-1R 2 | Interleukin-1 receptor 2 | GAGAAGAAGAGACACGGATG | CAGGACACAGCGGTAATAG |
| IL-11 | Interleukin-11 receptor | GACGAAGCGAGTGGAT | CCTTTGACCTGGAGACA  |
| NFKBIA | NF-kappa-B inhibitor alpha | AACATGGACTTGTATATTTG | CTCAGAATTTCAATGATCTT |
| GAPDH | Glyceraldehyde-3-phosphate dehydrogenase | ATTTGGCTACAGCAACAGG | TTGAGCACAGGGTACTTTATT |
| **ChIP RT–qPCR primer** |
| Abbrevia-tion | Gene | Forward primer | Reverse primer |
| NFKBIA | NF-kappa-B inhibitor alpha | AAAAAACGGAAAGGACCG | TGGCTTCGTCCTCTGCTA |
| **Vector sequence** |
| Gene | Forward primer | Reverse primer |
| GANQ CDS | ACTCTGGAGTCCATCATGGCG | AGCGTAATCTGGAACATCGTATGGGTA (HA)GACCAGATTGTACTCCTTCAGGTTCAAC |
| NFKBIA CDS | ATGTTCCAGGCGGCCGAGCG | GCGGCCGCTTAAGCGTAATCTGGAACATCGTATGGGTATAACGTCAGACGCTGGC |