

Supplement Table 1. Primers used in RT-qPCR in human adult testis explants

Gene	Forward primer (5'-3')	Reverse primer (5'-3')	Amplicon length (bp)
<i>CYP19A1</i>	CCAGGTCCTGGCTACTGCAT	GATCCCCATCCACAGGAATCT	69
<i>DAZL</i>	GAAGGCAAAATCATGCCAAACAC	CTTCTGCACATCCACGTCATTA	186
<i>FSHR</i>	TGCCATTGAACTGAGGTTG	GGTCCCCAAATCTGAAAAT	74
<i>INHBB</i>	GCGTTTCCGAAATCATCAG	GCCTTCGTTGGAGATGAAGA	86
<i>INSL3</i>	CCCAGAGATGCGTGAGAAGT	CCAGCCACTGTAGCAACTC	229
<i>LIN28A</i>	AAGCTGCACATGGAAGGGTT	CCGCCTCTCACTCCCAATAC	138
<i>POU5F1</i>	TACTCCTCGGTCCCTTTCC	CAAAAACCCTGGCACAAACT	131
<i>REC8</i>	TTTGGGATGATGTCTGTGGA	CTGGGATTGCAGCCTCTAAG	85
<i>SOX9</i>	AACGCCTTCATGGTGTGG	TCTCGCTCTCGTTCAGAAGTC	124
<i>STRA8</i>	GAGGGCAGCGTGAAGGACAG	GCAGCTGGCAAGCACTGAAC	165
<i>SYCP3</i>	TGCTGGAAGGAGTTGGAGTTGA	TCCCACTGCTGAAACAAAGTCA	193
Reference genes	Forward primer (5'-3')	Reverse primer (5'-3')	Amplicon length (bp)
<i>RPLP0</i>	TCTACAACCTGAAGTGCTTGAT	CAATCTGCAGACAGACTGG	167
<i>RPS20</i>	AACAAGCCGCAACGTAAAA	ACGATCCCACGTCTTAGAA	96

Primers used in the RT-qPCR to determine the expression of genes involved in Leydig cell function (*CYP11A1*, *INSL3*), germ cell differentiation (*DAZL*, *LIN28A*, *POU5F1*), meiosis (*SYCP3*, *STRA8*, *REC8*), and Sertoli cell function (*INHBB*, *SOX9*, *FSHR*) upon CBD and/or THC 48 hours exposure. *RPLP0* and *RPS20* genes were used as housekeeping genes to normalize the expression of the genes of interest. RT-qPCR was performed using iTaq Universal SYBR Green Supermix (Bio-Rad) in a CFX384 Touch Real-Time PCR Detection System (Bio-Rad).

CBD: cannabidiol, *CYP19A1*: cytochrome P450 family 19 subfamily a member 1, *DAZL*: deleted in azoospermia 1, *FSHR*: follicle-stimulating hormone receptor, *INHBB*: inhibin subunit beta, *INSL3*: insulin like 3, *LIN28A*: lin-28 homolog A, *POU5F1*: POU class 5 homeobox 1, *REC8*: REC8 meiotic recombination protein, *SOX9*: SRY-box transcription factor 9, *STRA8*: stimulated by retinoic acid 8, *SYCP3*: synaptonemal complex protein 3, THC: Δ^9 -tetrahydrocannabinol, *RPLP0*: ribosomal protein lateral stalk subunit P0, *RPS20*: ribosomal protein S20.