

**Table S1. Clinical data from control patients.**

| <b>Control Patient</b>    | <b>Age</b> | <b>Fertility record (children)</b> | <b>FSH (mUI/ML)</b> | <b>LH (mUI/ML)</b> | <b>Testosterone (ng/dL)</b> | <b>Comorbidity</b> |
|---------------------------|------------|------------------------------------|---------------------|--------------------|-----------------------------|--------------------|
| #1                        | 62         | Yes                                | 2.57                | 3.91               | 227                         | Prostate cancer    |
| #2                        | 60         | Yes                                | 9.44                | 4.42               | 398                         | Prostate cancer    |
| #3                        | 58         | Yes                                | 1.49                | 4,18               | 523                         | Prostate cancer    |
| #4                        | 46         | Yes                                | 1.64                | 3.83               | 646                         | Prostate cancer    |
| #5                        | 57         | Yes                                | 2.41                | 3.68               | 288                         | Prostate cancer    |
| #6                        | 65         | Yes                                | 2.38                | 9.40               | 267                         | Prostate cancer    |
| <b>Value of Reference</b> | -          | -                                  | 1.55-9.74           | 0.82-6.22          | 71.8-623                    | -                  |

**Table S2.** Antibodies and Primers (qPCR) used in this study.

| Antibodies                                              | Type                             | Species | Source                 | Id        | Dilution |
|---------------------------------------------------------|----------------------------------|---------|------------------------|-----------|----------|
| 3 $\beta$ HSD                                           | Polyclonal                       | Goat    | Santa Cruz Biotech.    | sc-30820  | 1:100    |
| AGT1R                                                   | Polyclonal                       | Rabbit  | Rhea Biotech           | IM-0064   | 1:50     |
| Anti- Protein S COVID-19                                | Monoclonal                       | Rabbit  | Rhea Biotech           | IM-0828   | 1:50     |
| Anti-Spike RBD                                          | Monoclonal                       | Mouse   | Abcam                  | Ab277624  | 1:100    |
| Caspase 3                                               | Polyclonal                       | Rabbit  | Imuny                  | IM0035    | 1:100    |
| Caspase 8                                               | Polyclonal                       | Mouse   | Cell Signaling         | Asp 387   | 1:100    |
| CD68                                                    | Monoclonal                       | Mouse   | Abcam                  | ab955     | 1:20     |
| ECA2                                                    | Monoclonal                       | Mouse   | Proteintech            | AG15554   | 1:100    |
| Endothelin                                              | Polyclonal                       | Rabbit  | Santa Cruz Biotech.    | sc-98727  | 1:100    |
| Mast Cell Chymase                                       | Polyclonal                       | Goat    | Santa Cruz Biotech.    | sc-324924 | 1:100    |
| TLR2                                                    | Polyclonal                       | Rabbit  | Rhea Biotech           | IM-0071   | 1:100    |
| UTF1                                                    | Monoclonal                       | Mouse   | EMD Millipore Corp.    | Mab4337   | 1:100    |
| Goat anti-rabbit<br>(IgG-CFL 488)                       | Secondary                        | Goat    | Santa Cruz Biotech.    | sc-362262 | 1:200    |
| Goat anti-mouse<br>(IgG-488)                            | Secondary                        | Goat    | Invitrogen             | A-11001   | 1:1000   |
| Goat anti-mouse<br>(IgG- 546)                           | Secondary                        | Goat    | Invitrogen             | A-11003   | 1:200    |
| Rabbit anti-goat<br>(Cy3)                               | Secondary                        | Rabbit  | Sigma                  | c2821     | 1:200    |
| Goat anti-mouse<br>(IgG-594)                            | Secondary                        | Goat    | Jackson Immunoresearch | 156816    | 1:100    |
| Gene                                                    | Sequence Of Primer (5'-3')       |         |                        |           |          |
| 3BHSD                                                   | F: CACATGGCCCGCTCCATAC           |         |                        |           |          |
| <i>3<math>\beta</math>-Hydroxysteroid Dehydrogenase</i> | R: GTGCCGCCGTTTTTCAGATTC         |         |                        |           |          |
| ACE1                                                    | F: CCA CGT CCC GGA AAT ATG AAG   |         |                        |           |          |
| <i>Angiotensin I Converting Enzyme</i>                  | R: AGT CCC CTG CAT CTA CAT AGC   |         |                        |           |          |
| ACE2                                                    | F: CAA GAG CAA ACG GTT GAA CAC   |         |                        |           |          |
| <i>Angiotensin-Converting Enzyme 2</i>                  | R: CCA GAG CCT CTC ATT GTA GTC T |         |                        |           |          |
| AGTR1                                                   | F: ATTTAGCACTGGCTGACTTATGC       |         |                        |           |          |
| <i>Angiotensin II Receptor Type 1</i>                   | R: CAGCGGTATTCCATAGCTGTG         |         |                        |           |          |
| aSMA                                                    | F: CCC AGC CAA GCA CTG TCA       |         |                        |           |          |
| <i><math>\alpha</math>-Smooth Muscle Actin</i>          | R: TCC AGA GTC CAG CAC GAT G     |         |                        |           |          |
| BAD                                                     | F: CCC AGA GTT TGA GCC GAG TG    |         |                        |           |          |
| <i>BCL2 Associated Agonist of Cell Death</i>            | R: CCC ATC CCT TCG TCG TCC T     |         |                        |           |          |
| BAX                                                     | F: GAT GCG TCC ACC AAG AAG C     |         |                        |           |          |
| <i>BCL2-associated X protein</i>                        | R: CCA GTT GAA GTT GCC GTC AG    |         |                        |           |          |
| CASP3                                                   | F: GAC TGT GGC ATT GAG ACA GAC   |         |                        |           |          |
| <i>Caspase-3</i>                                        | R: CTT TCG GTT AAC CCG GGT AAG   |         |                        |           |          |

|                                                            |                                        |
|------------------------------------------------------------|----------------------------------------|
| CLDN11                                                     | F: CGGTGTGGCTAAGTACAGGC                |
| <i>Claudin 11</i>                                          | R: CGCAGTGTAGTAGAAACGGTTTT             |
| CMA1                                                       | F: GGCTTCAACACACCTGTTCTT               |
| <i>Chymase 1</i>                                           | R: TGGAAAACCACATTTGTGACGC              |
| COX2                                                       | F: CTGGCGCTCAGCCATACAG                 |
| <i>Cyclooxygenase-2</i>                                    | R: CGCACTTATACTGGTCAAATCCC             |
| CX43                                                       | F: GGT CTG AGT GCC TGA ACT TGC CT      |
| <i>Connexin 43</i>                                         | R: TGC CTG GGC ACC ACT CTT TTG C       |
| DAZL                                                       | F: GCCCACAACCACGATGAATC                |
| <i>Deleted in azoospermia-like</i>                         | R: CGGAGGTACAACATAGCTCCTTT             |
| GATA4                                                      | F: CCT GGC CTG TCA TCT CAC TAC         |
| <i>GATA Binding Protein 4</i>                              | R: AGA GGA CAG GGT GGA TGG A           |
| HPRT1                                                      | F: CCT GGC GTC GTG ATT AGT GAT         |
| <i>Hypoxanthine Phosphoribosyltransferase 1</i>            | R: AGA CGT TCA GTC CTG TCC ATA A       |
| HRH4                                                       | F: TGGGCCAATGATTCTAGTTTCAG             |
| <i>Histamine Receptor H4</i>                               | R: ACTAAGATGACTGGGATCACGAA             |
| HSD17B3                                                    | F: CCC ATC TAT TCG GTT CGT ATG GGC     |
| <i>17<math>\beta</math>-Hydroxysteroid Dehydrogenase 3</i> | R: GCC AGA GTC AGC GAA GGC GA          |
| LHR                                                        | F: GCT GTG CTT TTA GAA ACT TGC CAA CAA |
| <i>Luteinizing Hormone Receptor</i>                        | R: TTC ATA GTC CCA GCC ACT CAG TTC ACT |
| MCP1                                                       | F: GTG TTC AAG TCT TCG GAG TT          |
| <i>Monocyte Chemoattractant Protein-1</i>                  | R: CAA TAG GAA GAT CTC AGT GC          |
| OCLN                                                       | F: ACAAGCGGTTTTATCCAGAGTC              |
| <i>Occludin</i>                                            | R: GTCATCCACAGGCGAAGTTAAT              |
| PDGF                                                       | F: GCT GCT GCA ACA CGA GCA GT          |
| <i>Platelet-derived growth factor</i>                      | R: CCG GAT TCA GGC TTG TGG TC          |
| RPL19                                                      | F: GCG GGC CAA GGT GTT TTT C           |
| <i>Ribosomal Protein L19</i>                               | R: TCG CCT CTA GTG TCC TCC G           |
| SOX9                                                       | F: GAC TTC CGC GAC GTG GAC             |
| <i>SRY-Box Transcription Factor 9</i>                      | R: GTT GGG CGG CAG GTA CTG             |
| STAR                                                       | F: GGGAGTGGAACCCCAATGTC                |
| <i>Steroidogenic Acute Regulatory Protein</i>              | R: CCAGCTCGTGAGTAATGAATGT              |
| TGFB1                                                      | F: CTA ATG GTG GAA ACC CAC AAC G       |
| <i>Transforming growth factor beta 1</i>                   | R: TAT CGC CAG GAA TTG TTG CTG         |
| TMPRSS2                                                    | F: ACTCTGGAAGTTCATGGGCAG               |
| <i>Transmembrane Serine Protease 2</i>                     | R: TGAAGTTTGGTCCGTAGAGGC               |
| TRPB2                                                      | F: TGGAAAACCACATTTGTGACGC              |
| <i>Tryptophan synthase beta chain 2</i>                    | R: GACACGGGTGTAGATGCCA                 |
| VEGF                                                       | F: CAC CCA TGG CAG AAG GAG GA          |
| <i>Vascular endothelial growth factor</i>                  | R: ACT CCA GGC CCT CGT CAT TG          |

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