

Table S1. List of the analysed genes by WES. Gene: Gene name. Encoded protein: name of the encoded protein. Literature references: references and year of publication of the articles describing the gene in relation to EM. The novel candidate genes identified are reported in bold.

Gene	Encoded protein	Literature references
<i>ABCA13</i>	ATP-binding cassette transporter 13	NA
<i>BDNF</i>	Brain-Derived Neurotrophic Factor	doi: 10.1177/1933719117732161 (2018), doi: 10.1186/s13048-022-00963-9 (2022), doi: 10.1038/s41588-023-01323-z (2023)
<i>C3</i>	Complement C3	doi: 10.29271/jcpsp.2019.08.702 (2019), doi: 10.3389/fimmu.2021.693118 (2021)
<i>CCDC170</i>	Coiled-Coil Domain Containing 170	doi: 10.1038/ncomms15539 (2017), doi: 10.1093/molehr/gaaa082 (2021)
<i>CEP112</i>	Centrosomal Protein 112	doi: 10.1101/406967 (2018), https://doi.org/10.3892/wasj.2023.189 (2023)
<i>COX2</i>	Prostaglandin-Endoperoxide Synthase 2	https://doi.org/10.1186/2047-783X-17-12 (2012), doi: 10.7150/ijbs.35128 (2019), doi: 10.1016/j.tjog.2021.05.022 (2021)
<i>CSMD1</i>	CUB And Sushi Multiple Domains 1	NA
<i>CYP19A1</i>	Cytochrome P450 Family 19 Subfamily A Member 1	doi: 10.3390/ijms21218235 (2020), doi: 10.21873/invivo.11970 (2020), doi: 10.1016/j.ejogrb.2020.05.023 (2020)
<i>ESR1</i>	Estrogen Receptor 1	doi: 10.1038/ncomms15539 (2017), doi: 10.1093/molehr/gaaa082 (2021), doi: 10.1038/s41588-023-01323-z (2023)
<i>FCRL3</i>	Fc Receptor Like 3	doi: 10.1016/j.humimm.2011.05.005 (2011), doi: 10.1016/j.fertnstert.2012.01.125 (2012), doi: 10.1097/MD.0000000000001168 (2015)
<i>FN1</i>	Fibronectin 1	doi: 10.1136/jmedgenet-2012-101257 (2013), doi: 10.1038/ncomms15539 (2017), doi: 10.3892/mmr.2019.10247 (2019)
<i>FSHB</i>	Follicle Stimulating Hormone Subunit Beta	doi: 10.1038/ncomms15539 (2017), doi: 10.3389/fendo.2021.760616 (2021), doi: 10.1038/s41588-023-01323-z (2023)
<i>GREB1</i>	Growth Regulating Estrogen Receptor Binding 1	doi: 10.1017/thg.2015.61 (2015), doi: 10.1038/ncomms15539 (2017), doi: 10.3892/mmr.2019.10247 (2019), doi: 10.1038/s41588-023-01323-z (2023)
<i>HOXA10</i>	Homeobox A10	doi: 10.1177/1933719118768704 (2018), doi: 10.1186/s13104-018-3836-1 (2018), doi: 10.1177/1933719118766255 (2019), doi: 10.1038/s41588-023-01323-z (2023)
<i>IL10</i>	Interleukin 10	doi: 10.4103/1735-1995.166215 (2015), doi: 10.1038/cddis.2017.95 (2017), doi: 10.1093/humrep/deac248 (2023)
<i>IL15</i>	Interleukin 15	doi: 10.1530/REP-16-0089 (2016), doi: 10.1074/jbc.RA120.012753 (2020), doi: 10.1016/j.fertnstert.2021.11.024 (2022)

<i>IL16</i>	Interleukin 16	doi: 10.1111/iji.12281 (2016), doi: 10.3892/ijmm.2018.3368 (2018), https://doi.org/10.3892/wasj.2023.189 (2023)
<i>IL17A</i>	Interleukin 17A	doi: 10.3389/fimmu.2020.00108 (2020), doi: 10.7150/ijms.71972 (2022), doi: 10.1080/01443615.2023.2199852 (2023)
<i>IL18</i>	Interleukin 18	doi: 10.1111/j.1600-0897.2012.01147.x (2012), doi: 10.1016/j.fertnstert.2016.07.005 (2016), doi: 10.2174/0929866525666180412160045 (2018)
<i>IL1A</i>	Interleukin 1 alpha	doi: 10.1038/jhg.2013.32 (2013), doi: 10.1093/humrep/deu267 (2015), doi: 10.1080/09513590.2019.1631790 (2020)
<i>IL1B</i>	Interleukin 1 beta	doi: 10.1016/j.cyto.2015.12.015 (2017), doi: 10.1093/molehr/gaz045 (2019), doi: 10.1093/humrep/deaa017 (2020)
<i>IL1R1</i>	Interleukin 1 Receptor Type 1	doi: 10.1111/j.1600-0897.2012.01136.x (2012), doi: 10.3389/fimmu.2019.02021 (2019)
<i>IL2RB</i>	Interleukin 2 Receptor Subunit Beta	doi: 10.1007/s43032-021-00751-8 (2022), doi: 10.1186/s12916-022-02500-3 (2022)
<i>IL4</i>	Interleukin 4	doi: 10.1177/1933719115578930 (2015), doi: 10.5114/ceji.2016.60992 (2016)
<i>IL6</i>	Interleukin 6	doi: 10.3892/etm.2017.4794 (2017), doi: 10.1210/en.2017-00562 (2018), doi: 10.1210/clinem/dgaa096 (2020), doi: 10.1093/molehr/gaab064 (2021)
<i>KAZN</i>	Kazrin	doi: 10.1080/09513590.2018.1499090 (2019), doi: 10.3892/etm.2019.7346 (2019)
<i>KDR</i>	Kinase Insert Domain Receptor	doi: 10.1159/000350665 (2013), doi: 10.1038/ncomms12350 (2016), doi: 10.1016/j.ejogrb.2016.10.046 (2017)
<i>LAMA5</i>	Laminin Subunit Alpha 5	doi: 10.1016/j.ejogrb.2013.10.007 (2013), doi: 10.1080/09513590.2018.1499090 (2019)
<i>LILRB1</i>	Leukocyte Immunoglobulin Like Receptor B1	doi: 10.1007/s00438-017-1404-3 (2018), doi: 10.3390/jcm8091468 (2019)
<i>LILRB2</i>	Leukocyte Immunoglobulin Like Receptor B2	doi: 10.1007/s00438-017-1404-3 (2018), https://www.spandidos-publications.com/10.3892/wasj.2023.189 (2023)
<i>MAP3K4</i>	Mitogen-Activated Protein Kinase Kinase Kinase 4	doi: 10.1093/humrep/dex024 (2017), doi: 10.1111/jog.14710 (2021), https://doi.org/10.3892/wasj.2023.189 (2023)
<i>MMP2</i>	Matrix Metalloproteinase 2	doi: 10.5604/12321966.1226861 (2016), doi: 10.1371/journal.pone.0163540 (2016)
<i>MMP3</i>	Matrix Metalloproteinase 3	doi: 10.1002/mrd.22931 (2018), doi: 10.1016/j.eurox.2019.100041 (2019), doi: 10.3390/ijms21082840 (2020)
<i>MMP9</i>	Matrix Metalloproteinase 9	doi: 10.5604/12321966.1226861 (2016), doi: 10.3390/diagnostics10060364 (2020)

<i>NEB</i>	Nebulin	NA
<i>NGF</i>	Nerve Growth Factor	doi: 10.1016/j.jogoh.2020.101895 (2021), doi: 10.1038/s41588-023-01323-z (2023)
<i>RHOA</i>	Ras Homolog Family Member A	doi: 10.4103/1673-5374.170325 (2015), doi: 10.1111/jcmm.15689 (2020)
<i>RHOJ</i>	Ras Homolog Family Member J	doi: 10.4103/1673-5374.170325 (2015), doi: 10.1016/j.ejogrb.2017.08.037 (2017)
<i>RND3</i>	Rho Family GTPase 3	doi: 10.1002/cphy.c150018 (2015), doi: 10.4103/1673-5374.170325 (2015), doi: 10.3389/fmolb.2021.743012 (2021)
<i>SKAP1</i>	Src Kinase Associated Phosphoprotein 1	doi: 10.1016/j.xhgg.2023.100185 (2023), doi: 10.1038/s41588-023-01323-z (2023)
<i>SYNE1</i>	Spectrin Repeat Containing Nuclear Envelope Protein 1	doi: 10.1038/ncomms15539 (2017), doi: 10.1038/s41588-023-01323-z (2023)
<i>SYNE2</i>	Spectrin Repeat Containing Nuclear Envelope Protein 2	doi: 10.1210/en.2014-1490 (2014), doi: 10.3390/cells10040749 (2021)
<i>TNF</i>	Tumor Necrosis Factor	doi: 10.1177/1933719114536472 (2015), doi: 10.1111/aji.13305 (2020)
<i>TYK2</i>	Tyrosine Kinase 2	doi: 10.1016/j.humimm.2011.12.009 (2012), doi: 10.1016/j.humimm.2012.09.007 (2013)
<i>VEGF</i>	Vascular Endothelial Growth Factor A	doi: 10.1016/j.fertnstert.2015.12.016 (2016), doi: 10.1007/s11033-019-04807-6. (2019)
<i>VEZT</i>	Vezeatin	doi: 10.1093/humrep/dev022 (2015), doi: 10.1093/humrep/dew047 (2016), doi: 10.3390/ijms21051765 (2017)
<i>WNT4</i>	Wnt Family Member 4	doi: 10.1007/s10815-015-0523-1 (2015), doi: 10.3892/mmr.2017.7398 (2017)
<i>WT1</i>	WT1 Transcription Factor	doi: 10.1038/s41588-023-01323-z (2023), https://doi.org/10.3390/reprodmed1010003 (2020)
<i>ZNF366</i>	Zinc Finger Protein 366	doi: 10.1155/2015/461024 (2015), doi: 10.3892/etm.2019.7346 (2019)