UNSUCCESSFUL IVF TREATMENTS, RECURRENT MOLAR PREGNANCIES AND/OR RECURRENT PREGNANCY LOSS PANEL[1] DG-5.2.0 (57 GENES)

Gene symbols used follow HGNC guidelines: Gray KA, Yates B, Seal RL, Wright MW, Bruford EA. Nucleic Acids Res. 2015 Jan 43(Database issue):D1079-85.
OMIM disease identifiers and descriptions : October 25th, 2026.
This list is accurate for panel version DG 5.2.0
non-protein coding genes are covered, but as coverage statistics are based on protein coding regions, statistics could not be generated.
Ad 1. Blank field signifies a gene without a current OMIM association
Ad 2. OMIM phenotype descriptions between {} signify risk factors
*Ad * This value indicates the percentage of a gene's coding sequence covered at or above the specified Genotype Quality (GQ) threshold, based on alignment against the GRCh38 reference genome. The GQ score is a measure of the confidence of the genotype call and is calculated based on both the quantity and quality of the DNA reads.*
- GQ 20: 99% confidence in the genotype call
- GQ 30: 99.9% confidence in the genotype call

Gene	WES GQ>20 | GQ>30*	srWGS GQ>20 | GQ>30*	lrWGS GQ>20 | GQ>30*	Associated Phenotype description and OMIM disease ID
ASTL	99% | 99%	97% | 97%	98% | 98%	Oocyte/zygote/embryo maturation arrest 11, 619643
BTG4	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 8, 619009
CCNB3	100% | 100%	99% | 99%	100% | 100%	
CCNP	100% | 100%	96% | 96%	99% | 99%	
CDC20	100% | 100%	96% | 96%	99% | 99%	Oocyte/zygote/embryo maturation arrest 14, 620276
CDC23	100% | 100%	98% | 98%	99% | 99%	Oocyte/zygote/embryo maturation arrest 28, 621730
CENPH	100% | 100%	98% | 98%	99% | 99%	
CHEK1	99% | 99%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 21, 620610
CIP2A	100% | 100%	97% | 97%	100% | 100%	
COX15	100% | 100%	96% | 96%	99% | 99%	Mitochondrial complex IV deficiency, nuclear type 6, 615119
DDOST	100% | 100%	97% | 97%	99% | 99%	Congenital disorder of glycosylation, type Ir, 614507
DLGAP5	99% | 98%	96% | 96%	99% | 99%	
FBXO43	100% | 100%	98% | 98%	99% | 99%	Spermatogenic failure 64, 619696;Oocyte/zygote/embryo maturation arrest 12, 619697
HAUS6	92% | 92%	97% | 97%	99% | 99%	
HFM1	100% | 100%	98% | 98%	99% | 99%	?Hydatidiform mole, recurrent, 5, 621720;Premature ovarian failure 9, 615724
HORMAD2	100% | 100%	97% | 97%	99% | 99%	
INCENP	100% | 100%	96% | 96%	99% | 99%	

KASH5	100% | 100%	97% | 96%	98% | 98%	Hydatidiform mole, recurrent, 6, 621721;Spermatogenic failure 88, 620547;Premature ovarian failure 22, 620548
KHDC3L	100% | 100%	96% | 96%	99% | 99%	Hydatidiform mole, recurrent, 2, 614293
KIF11	100% | 100%	98% | 98%	99% | 99%	Microcephaly with or without chorioretinopathy, lymphedema, or impaired intellectual development, 152950
KIF18A	100% | 100%	98% | 98%	99% | 99%	
KPNA7	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 17, 620319
LHCGR	100% | 100%	98% | 98%	99% | 99%	Leydig cell adenoma, somatic, with precocious puberty, 176410;Leydig cell hypoplasia with pseudohermaphroditism, 238320;Leydig cell hypoplasia with hypergonadotropic hypogonadism, 238320;Luteinizing hormone resistance, female, 238320;Precocious puberty, male, 176410
LHX8	93% | 93%	97% | 97%	99% | 99%	
MAD2L1BP	87% | 87%	95% | 95%	99% | 99%	
MEI1	100% | 100%	96% | 96%	99% | 99%	Spermatogenic failure 103, 621619;Oocyte/zygote/embryo maturation arrest 26, 621620;Hydatidiform mole, recurrent, 3, 618431
MEI4	100% | 100%	98% | 98%	100% | 100%	
MLH3	100% | 100%	97% | 97%	99% | 99%	{Endometrial cancer, susceptibility to}, 608089;Colorectal cancer, somatic, 114500;Colorectal cancer, hereditary nonpolyposis, type 7, 614385
MOS	98% | 98%	93% | 93%	99% | 99%	Oocyte/zygote/embryo maturation arrest 20, 620383
NLRP14	100% | 100%	97% | 97%	99% | 99%	
NLRP2	100% | 100%	96% | 96%	99% | 99%	Oocyte/zygote/embryo maturation arrest 18, 620332
NLRP5	100% | 100%	96% | 96%	98% | 98%	Oocyte/zygote/embryo maturation arrest 19, 620333
NLRP7	100% | 100%	95% | 95%	98% | 98%	?Ooxyte/zygote/embryo maturation arrest 25, 621471;Hydatidiform mole, recurrent, 1, 231090
OOEP	100% | 100%	95% | 95%	98% | 98%	
PABPC1L	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 22, 621093
PADI6	99% | 99%	93% | 93%	99% | 99%	Oocyte/zygote/embryo maturation arrest 16, 617234
PANX1	100% | 100%	96% | 96%	100% | 100%	Oocyte/zygote/embryo maturation arrest 7, 618550
PATL2	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 4, 617743
REC114	100% | 100%	98% | 98%	100% | 100%	Oocyte/zygote/embryo maturation arrest 10, 619176
RGS12	100% | 100%	96% | 96%	99% | 99%	
RNF212B	100% | 100%	97% | 97%	99% | 99%	
SPDYC	100% | 100%	96% | 96%	98% | 98%	

SPRY4	100% | 100%	97% | 97%	99% | 99%	Hypogonadotropic hypogonadism 17 with or without anosmia, 615266
TACC3	99% | 99%	96% | 96%	97% | 96%	Oocyte/zygote/embryo maturation arrest 27, 621713
TBPL2	100% | 100%	97% | 97%	99% | 99%	
TLE6	100% | 100%	95% | 95%	98% | 98%	Oocyte/zygote/embryo maturation arrest 15, 616814
TOP6BL	76% | 76%	97% | 97%	99% | 99%	Hydatidiform mole, recurrent, 4, 618432
TRIP13	100% | 100%	96% | 96%	99% | 99%	Oocyte/zygote/embryo maturation arrest 9, 619011;Mosaic variegated aneuploidy syndrome 3, 617598
TUBA1C	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 24, 621232
TUBA4A	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 23, 621231;Spastic ataxia 11, autosomal dominant, 621226;Frontotemporal dementia and/or amyotrophic lateral sclerosis 9, 616208;Congenital myopathy 26, 621225
TUBB8	98% | 98%	94% | 94%	99% | 99%	Oocyte/zygote/embryo maturation arrest 2, 616780
WEE2	100% | 100%	98% | 98%	100% | 100%	Oocyte/zygote/embryo maturation arrest 5, 617996
ZFP36L2	100% | 100%	95% | 95%	98% | 98%	Oocyte/zygote/embryo maturation arrest 13, 620154
ZP1	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 1, 615774
ZP2	100% | 100%	97% | 97%	99% | 99%	Oocyte/zygote/embryo maturation arrest 6, 618353
ZP3	97% | 96%	95% | 94%	98% | 98%	Oocyte/zygote/embryo maturation arrest 3, 617712
ZP4	100% | 100%	97% | 97%	100% | 100%	