

Supplemental Table 2. Primers for Multiplex Quantitative RT-PCR

Gene Symbol	Forward Primer	Gene Symbol	Amplicon Size
ACTA2	ACCCGATAGAACATGGCATCA	GGCAACACGAAGCTCATTGTA	86
ANLN	TGCACCATTGGCACAACA	CTGCTGGTGTCTTTCAATTCCA	84
BEX1	GGGAGAAGGAGGAGACTACA	GGGCTCCCCTTTATTAGCAA	137
BMP7	ACGTTCCGGATCAGCGTTTA	CTGTGAGCAGGAAGAGATCC	74
CALD1	ACCCAGATGGAAACAAGTCAC	GAGGTTCCGCTTGCTGGATA	78
CASP8AP2	ACTGCAAAGGAGGCAACA	TCAGCTCTTTCATTTGTAGTTGAC	73
CDC42SE2	TCAACTGCTGTATTGCAGAAC	TGTGGGCTCTCCAATCATAC	77
CDH3	TGACAATGCTCCCATGTTTGAC	ATGGCCCACTGCATTCTCA	67
CDKN2A	CACCGCTTCTGCCTTTTCA	CCCACATGAATGTGCGCTTA	75
CEACAM1	AGTGACCCAGTCACCTTGAA	TTTGCCCCTGGACGGTAATA	86
CEACAM21	TGAGGTCTCCAACCCAGTCA	CAGGATGCCTAGAGTGTTGTCA	85
CRYBB2	GCAAGCCACAGTCCCTCAA	TCATGCGAGTGGCCTTGAAA	70
D4S234E	TGTCAATCAGCTGCAGTTCC	CTTTCTTGCGGTCAGGTTCA	80
DDX17	TGGCCAGCTATGTGTATCCA	TAAGGATGGGTGCCTTTCCA	91
DIO2	AGCTTCCTCCTCGATGCCTA	GAGACATGCACCACACTGGAA	74
ECEL1	AACACACGCTTGGGGAGAAC	TCCCGCACCCACTTCTGATA	79
EMID2	TCCAGCGCGTGTACCA	GTGCGGTAGGACACTCTGTA	94
ENPP3	GCTGCTGGGATTTTGAAGACA	TCTGGTCTCTCCACAACGAAA	80
EPHA2	AGTGTGGAAGTACGAGGTCAC	TCCAGGGTCACGGAGAAAC	90
ERAP2	TTCCGATAAACTGTGGGTCAC	TTGTGACCAGGTTGCCAAA	74
FAM110C	CGCATCATCAAGTGGCTGTA	GGATCCCAAATCACCCATGAA	133
FAM48A	TCTGATGACTCACAGCCAAC	TGAGTACCAGCTTCACATTCAA	80
FAM81B	GGAGTTGGAGATCTTCGAGGAA	GTGCTCTTGCTGAATAAGTGAA	90
FBN1	TTCATGCCCCGAAAGGCTACA	TGTGTTGCTTGGTTGCACAC	80
FBXO15	AGCACATTAGGCTCGGCTA	CATACTCGGGGCTATCATCCA	76
FGF18	ACCAGTGGGAAACACATCCA	CCGAAGGTGTCTGTCTCCA	101
FOS	CCCGCAGACTCCTTCTCC	TGGTCGAGATGGCAGTGAC	112
FOSB	CCCTCTGCCGAGTCTCAATA	GAAGGAACCGGGCATTTC	108
FOSL1	AACCGGAGGAAGGAACTGAC	CTGCAGCCCAGATTTCTCA	75
FOXP1	GCCTACTGCACACCTCTCA	CCCATGGAAGCGGTAGTGTATA	83
GABRP	AATACCCCATGGACACACAGAC	GCCAGGTGAACTCCACATCA	81
GIN54	AGGATCCGCTACGTCCTCA	CCTTCTCAAGGACATGAGGGAAA	82
GNG12	TATAGCCCAGGCAAGGAGAA	CTGGCATGTTCTCACAGTA	114
GOLT1A	GGTGTGGTTATCGTGCTCCTAC	CCGAAGGCGACAGGGAAAA	101
GSTM1	TGCCCATGATACTGGGGTAC	TTCCTCATAGCTTGAGTCTGTGTA	89
GSTM2	ACTGGGGTACTGGAACATCC	CCTCGTAGCTTGAGTCTGTGTA	77
GSTM4	CAGGCTATGGACGTCTCCAA	TTCCTCCAAGTATTCTGGCTTCA	84

GSTT1	TGCCAAGAAGAACGACATTCC	GGGCAAAGGCATCGCTTAA	80
GZMH	CCCCTACATGGCCTTTGTTCA	TGAGCAGCTGTCAGCACAAA	96
HELLS	CAGCCATTGTGAACCGTACAA	GTCGACCAGTAGGACTTAACTCA	81
HLA-DQA1	CAACTCTACCGCTGCTACC	TGTCACGGGAGACTTGGA	64
HSD17B2	AGGGAGGCTGGTGAATGTCA	GCCGCCTTTGATGAGCCATA	81
ILDR1	TGACATGGCGCTTCAAGTCC	GGGCCACTATGCGAACTTCC	138
IQCG	AAGAGGCCCGGACTCATACA	AGAACTCCAGCCTCTCCTCAA	78
IQGAP1	TGGTGGTGCAAGAGGAACA	TTGGGCATCACCTTCATCCA	77
KLHL24	CAATAAAGGCAGATGGCGTCAC	CCCATCATAGCCACCGACAA	73
LPHN2	CTGTCCGCAAATACCGTCAAA	CAGGCTCCGGTAAATGATGAAC	75
LTF	CTCCAGGAACCGTACTTCA	CTCTGATAAAAGCCACGTCTCC	80
MALAT1	TGTGTGCCAATGTTTCGTTT	AGGAGAAAGTGCCATGGTTG	200
MAPRE3	CCCTGCACCTCAACTATACCA	GGGGAAGAGCATGTCCATGAA	80
MS4A8B	TCCGTGGCAGCAGAAAATCA	CTGACGATGTTCAAGCCCAAAC	71
MUC5B	AGTCCATGGATATCGTCCTCAC	GCTCACCGGAATTTGGTCAA	83
MYCN	AGTACCTCCGAGAGGACAC	GGAACGCCGCTTCTCCA	105
NAA25	GTTGACCTCTTACCTGCTACAC	CCTCTGTTGGTGTGACAAA	82
NASP	CGTAGTGGGAATGTAGCTGAAC	TCCTCCACCAGGAGTGAAAC	81
NKAIN4	TCGTCCTCTGCGCTTTTCA	TGGTAGCCCAGGAAGTCAAAC	67
NMT2	CCGGGAGCACATTATTGACAC	GGAGCGTATAGAAGCTCAGGAA	80
NUPL1	GGCTTGCAATCAAGTGGCTTA	TGTGGTGCTGCATCCAAAAC	78
PCDH8	GGATCTCATCAACCACATGCA	CAGAGTGGCCCAGGATCTTA	71
PDK4	CTACTCGGATGCTGATGAACCA	CCAATGTGGCTTGGGTTTCC	73
PDZK1	TGGCCTTCAAGATGGAGACA	CCCATCCAGAACTAGTAAAGTCAC	127
PEG10	AGACATGCTGGCTCCTTTCA	ACGGACACGATCAACTGAGAA	82
PKHD1L1	AGCCTTCGGTAAAGGCAACA	GTCCTTGAGTATGGCCCTCAAA	86
PLCL1	AGCGGTTTCATCCATTACGAGAA	GCAATTGGAGGGAGTCCACATA	96
PRKRA	TGACCCTTCCAAGCAACCAA	TCTCCAGCCATGATGAATAGCC	79
PRKX	GAAACTGCTCGTGGTTGACA	AACCACCGATGATGCTTCAC	81
PTPN11	AAGCGCCGCTCATGACTATA	TATTGCCAGACCGTTCTCTCC	84
QKI	GCTGTGGGACCTATTGTTCA	GTCCAAGGATTCTCCAACA	91
RBM6	AAACAGTCTGAGCAGGAGCTA	CCTGCGATCATTTCTCTTCC	81
REN	AAGTGCAGCCGTCTCTACA	TGTGCTTGTAGCTGGAGGAA	76
RXFP1	AGTCGAATTTCCCCACCAACA	AAACGGGTGAGGACGTTATTCA	80
SCGB1D2	TGTGTCTCCTGCTGGTCAC	AGAAGTCTAACAGCTCAGAAACA	90
SCGB3A1	CCCGCGCCATGAAGCT	CTTGGCCGAGCCCACTAAG	89
SDCCAG8	GGCGAATCTGAGACCAAC	GGCCTTTGCTTCCTTGCTAAA	81
SECISBP2	GTGGTGATGACCAGTTTCCC	AACCGAAGGAGTGGAGATCA	80
SF1	CCCTGGACTTACTCGAGAACAA	GTCTCCTGTGCGCAGTTTAC	85
SFRP5	TGCACTGCCACAAGTTCC	CACTGTGCTCCATCTCACAC	120

SLC12A2	TGCTCCAGTACATGCAGATGAC	TTGGCTTCATACGACCAAGACC	80
SLC7A1	ACCAATAATCGCCACATTAGCC	GAGGTCCACCAAGTCCTTCA	82
SLC7A4	ACCAGCAACAGTATCGGGAA	ATGCTCAGGGCTGGAATCA	67
SLC8A1	GGGACTAACAGCTGGAGAGAA	CCACATTCATCGTCGTCATCA	80
SNRPA1	AAGAAAGGTGGGCCATCTCC	ACTTCAGCCAGAGTTGAAGCA	77
SNTN	TGCACAGTACCCAGGACAAA	CACTGAAGCCAGTTGTTTGGATA	128
SP3	AGGAGAGAATGCTGACAGTCC	ACTGAGCTGCCACTCTTCA	76
SYBU	AGCAACTCAGGCTCCTACAA	TTTCACCGCAAGACATGTACC	79
TMEM106B	GGAAAGGCACGCTTAAACAA	CCTCTGCTATAACGGTAGGTAC	88
TULP4	GCACATCTTCACACTGGACAC	TGCCATCAACAGCCTCGAA	85
UNC5A	ATCTACCTCACGCTGCACAA	CACAGCTAACGATGGGACTCA	85
VIM	CCTGTGAAGTGGATGCCCTTA	CAACGGCAAAGTTCTCTTCCA	81
VNN1	ACTGTGGAAGGGCGCTATTA	CTGAGTCACCGCAAGTGTTTAA	82
WDR1	CGATTCTCTCCTGATGGGAACA	CACCTTCTCCCCAGTCTTCC	87
WHSC1L1	AACCAAGGGAAGAACCAGTAC	GACACTTCCGTTGTTGGAAC	79
ZBBX	ACCGGAAATCATGATGACAAC	GTCTGTACTTCGCATTCTTCC	80

Supplemental Table 3. Summary of classifier characteristics.

A. Individual disease classifier characteristics.

Phase	Accuracy	Decision	Decision
		Pathology	Pathology Present
		Absent or Present	Endometriosis or No Endometriosis
No. of Probe Sets Used	No. of Probe Sets Used		
PE.ESE.MSE	93%	8372	12704
PE.ESE.MSE	93%	19277	29251
PE.ESE.MSE	93%	1579	1579
PE.ESE.MSE	93%	8372	12704
PE.ESE	100%	19277	23746
PE.ESE	100%	105	845
PE	100%	556	685
PE	100%	297	685
PE	100%	1282	2396
PE	100%	13	24
PE	100%	1282	3636
PE	100%	241	452
PE	100%	845	2396
PE	100%	159	452
PE	100%	159	452
PE	100%	15649	15649
PE	100%	30	452

ESE	100%	685	685
ESE	100%	685	556
ESE	100%	556	556
ESE	100%	4479	5518
ESE	100%	196	241
ESE	100%	12704	15649
ESE	100%	8372	10313
ESE	100%	685	367
ESE	100%	297	196
ESE	100%	367	241
ESE	100%	297	196
ESE	100%	12704	15649
ESE	100%	1579	1945
ESE	100%	452	556
ESE	100%	4479	3636
ESE	100%	685	685
ESE	100%	5518	5518
ESE	100%	367	297
ESE	100%	159	129
ESE	100%	4479	3636
ESE	100%	2396	1945
ESE	100%	2952	2952
ESE	100%	15649	12704
ESE	100%	159	297

ESE	100%	241	129
ESE	100%	2396	2396
ESE	100%	297	129
ESE	100%	10313	12704
ESE	100%	10313	12704
ESE	100%	10313	8372
ESE	100%	8372	8372
ESE	100%	41822	48847
ESE	100%	241	297
ESE	100%	3636	4479
ESE	100%	685	241
ESE	100%	556	452
ESE	100%	85	85
ESE	100%	6797	8372
ESE	100%	1282	1040
ESE	100%	367	241
ESE	100%	196	297
ESE	100%	12704	12704
ESE	100%	1579	1945
ESE	100%	10313	12704
ESE	100%	452	556
ESE	100%	12704	15649
ESE	100%	241	196
ESE	100%	19277	19277

ESE	100%	1945	1945
ESE	100%	12704	10313
ESE	100%	12704	15649
ESE	100%	297	241
ESE	100%	1945	3636
ESE	100%	3636	5518
MSE	91%	159	241
MSE	91%	845	845
MSE	91%	845	1040
MSE	91%	241	452

B. individual phase-specific severity classifier characteristics.

Decision		
Endometriosis		
Minimal-Mild or Moderate-Severe		
Phase	Accuracy	No. of Probe Sets Used
PE	100%	8372
PE	100%	2396
PE	100%	1040
PE	100%	6797
PE	100%	8372
PE	100%	5518
PE	100%	6797
PE	100%	2396

PE	100%	15649
PE	100%	4479
PE	100%	4479
PE	100%	1945
PE	100%	6797
PE	100%	4479
PE	100%	845
PE	100%	6797
PE	100%	2952
PE	100%	19277
PE	100%	6797
PE	100%	5518
PE	100%	556
PE	100%	2952
PE	100%	4479
PE	100%	3636
PE	100%	19277
PE	100%	4479
PE	100%	5518
PE	100%	845
PE	100%	2396
PE	100%	54674
PE	100%	15649
PE	100%	1945

PE	100%	2396
PE	100%	1282
PE	100%	5518
PE	100%	4479
PE	100%	1282
PE	100%	1282
PE	100%	12704
PE	100%	2952
PE	100%	2396
PE	100%	3636
PE	100%	196
ESE	100%	452
ESE	100%	129
ESE	100%	13
ESE	100%	2952
ESE	100%	367
ESE	100%	129
ESE	100%	196
ESE	100%	105
ESE	100%	30
ESE	100%	2952
ESE	100%	452
ESE	100%	196
ESE	100%	129

ESE	100%	367
ESE	100%	367
ESE	100%	13
ESE	100%	556
ESE	100%	37
ESE	100%	1945
ESE	100%	196
ESE	100%	105
ESE	100%	56
MSE	100%	2952
MSE	100%	12704
MSE	100%	2952
MSE	100%	1945
MSE	100%	8372
MSE	100%	1282
MSE	100%	54674
MSE	100%	44385
MSE	100%	8372
MSE	100%	54670
MSE	100%	23746
MSE	100%	2952
MSE	100%	1945
MSE	100%	19277
MSE	100%	4479

MSE	100%	10313
MSE	100%	44385
MSE	100%	4479
MSE	100%	3636
MSE	100%	15649
MSE	100%	5518
MSE	100%	5518
MSE	100%	4479
MSE	100%	44385
MSE	100%	23746
MSE	100%	6797
MSE	100%	6797
MSE	100%	12704
MSE	100%	5518
MSE	100%	19277
MSE	100%	3636
MSE	100%	15649
MSE	100%	1579
MSE	100%	12704
MSE	100%	1579
MSE	100%	10313
MSE	100%	8372
MSE	100%	4479
MSE	100%	12704

MSE	100%	23746
MSE	100%	1040
MSE	100%	54673
MSE	100%	10313
MSE	100%	8372
MSE	100%	3636

PE = proliferative phase endometrium

ESE = early secretory phase endometrium

MSE = mid-secretory phase endometrium

Supplemental Table 4. Phase-Specific Core Genes

4A. Proliferative Phase 100% Accuracy Disease and Severity Classifiers

4A.1. Core genes Disease Classifier Family: First Binary Decision (NE.NUPP vs. [E + NE.UPP])*

Gene.Symbol	Gene.Title
FOSB	FBJ murine osteosarcoma viral oncogene homolog B
DIO2	deiodinase, iodothyronine, type II
DDX17	DEAD (Asp-Glu-Ala-Asp) box polypeptide 17
FOS	FBJ murine osteosarcoma viral oncogene homolog
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
SNTN	sentan, cilia apical structure protein

* NE.NUPP = no endometriosis, no uterine or pelvic pathology; E = endometriosis; NE.UPP = no endometriosis but with other uterine or pelvic pathology.

4A.2. Core genes Disease Classifier Family: Second Binary Decision ([NE.UPP] vs. [E])

Gene.Symbol	Gene.Title
SLC8A1	solute carrier family 8 (sodium/calcium exchanger), member 1
LTF	Lactotransferrin
HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1
SLC7A4	solute carrier family 7 (cationic amino acid transporter, γ + system), member 4
PCDH8	protocadherin 8
CDKN2A	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
MUC5B	mucin 5B, oligomeric mucus/gel-forming
IQGAP1	IQ motif containing GTPase activating protein 1
RBM6	RNA binding motif protein 6
SCGB3A1	secretoglobin, family 3A, member 1
NASP	Nuclear autoantigenic sperm protein (histone-binding)
ACTA2	Actin, alpha 2, smooth muscle, aorta

NE.UPP = no endometriosis but with other uterine or pelvic pathology; E = endometriosis

4A.3. Core genes Severity Classifier Family: [E*.Min/Mild] vs. [E.Mod/Severe]

Gene.Symbol	Gene.Title
ANLN	anillin, actin binding protein
GINS4	GINS complex subunit 4 (Sld5 homolog)
VIM	vimentin
CASP8AP2	caspase 8 associated protein 2
LTF	lactotransferrin
FBN1	fibrillin 1
CDH3	cadherin 3, type 1, P-cadherin (placental)
EPHA2	EPH receptor A2

GSTT1	glutathione S-transferase theta 1
MAPRE3	microtubule-associated protein, RP/EB family, member 3
PRKX /// PRKY	protein kinase, X-linked /// protein kinase, Y-linked
PRKX	protein kinase, X-linked
GSTM4	glutathione S-transferase mu 4
SLC12A2	solute carrier family 12 (sodium/potassium/chloride transporters), member 2
GSTM2	glutathione S-transferase mu 2 (muscle)
FOSL1	FOS-like antigen 1
GSTM1	glutathione S-transferase mu 1
HSD17B2	hydroxysteroid (17-beta) dehydrogenase 2
NMT2	N-myristoyltransferase 2
GABRP	gamma-aminobutyric acid (GABA) A receptor, pi
PDZK1	PDZ domain containing 1
VNN1	vanin 1
PLCL1	phospholipase C-like 1
REN	renin
CEACAM1	carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein)
CRYBB2 /// CRYBB2P1	crystallin, beta B2 /// crystallin, beta B2 pseudogene 1
SCGB1D2	secretoglobin, family 1D, member 2
LPHN2	latrophilin 2
CDKN2A	cyclin-dependent kinase inhibitor 2A (melanoma, p16, inhibits CDK4)
SFRP5	secreted frizzled-related protein 5
D4S234E	DNA segment on chromosome 4 (unique) 234 expressed sequence
BMP7	bone morphogenetic protein 7
MYCN	v-myc myelocytomatosis viral related oncogene, neuroblastoma derived (avian)
PTPN11	protein tyrosine phosphatase, non-receptor type 11
SF1	splicing factor 1
GZMH	granzyme H (cathepsin G-like 2, protein h-CCPX)
FGF18	fibroblast growth factor 18
PEG10	paternally expressed 10
SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1
MUC5B	mucin 5B, oligomeric mucus/gel-forming
CEACAM21	carcinoembryonic antigen-related cell adhesion molecule 21
CALD1	caldesmon 1
HYMAI	hydatidiform mole associated and imprinted (non-protein coding)
FAM48A	Family with sequence similarity 48, member A
BEX1	brain expressed, X-linked 1
SYBU	syntabulin (syntaxin-interacting)

ECEL1	endothelin converting enzyme-like 1
HELLS	helicase, lymphoid-specific
ZBBX	zinc finger, B-box domain containing
IQCG	IQ motif containing G
KLHL24	kelch-like 24 (Drosophila)
WHSC1L1	Wolf-Hirschhorn syndrome candidate 1-like 1
TMEM106B	transmembrane protein 106B
GNG12	guanine nucleotide binding protein (G protein), gamma 12
ENPP3	ectonucleotide pyrophosphatase/phosphodiesterase 3
FOXP1	forkhead box P1
SECISBP2	SECIS binding protein 2
MS4A8B	membrane-spanning 4-domains, subfamily A, member 8B
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
PDK4	pyruvate dehydrogenase kinase, isozyme 4
SNRPN	small nuclear ribonucleoprotein polypeptide N
FAM110C	family with sequence similarity 110, member C
ERAP2	endoplasmic reticulum aminopeptidase 2
SDCCAG8	serologically defined colon cancer antigen 8
NKAIN4	Na ⁺ /K ⁺ transporting ATPase interacting 4
CDC42SE2	CDC42 small effector 2
EMID2	EMI domain containing 2
GOLT1A	golgi transport 1A
PKHD1L1	polycystic kidney and hepatic disease 1 (autosomal recessive)-like 1
FBXO15	F-box protein 15
SP3	Sp3 transcription factor
ENPP3	ectonucleotide pyrophosphatase/phosphodiesterase 3
ILDR1	immunoglobulin-like domain containing receptor 1
UNC5A	unc-5 homolog A (C. elegans)
NAA25	N(alpha)-acetyltransferase 25, NatB auxiliary subunit
PRKRA	protein kinase, interferon-inducible double stranded RNA dependent activator
RXFP1	relaxin/insulin-like family peptide receptor 1
TULP4	Tubby like protein 4
FAM81B	family with sequence similarity 81, member B
WDR1	WD repeat domain 1
NUPL1	nucleoporin like 1
QKI	Quaking homolog, KH domain RNA binding (mouse)
SNRPA1	Small nuclear ribonucleoprotein polypeptide A'
ASXL1	additional sex combs like 1 (Drosophila)
LRPAP1	low density lipoprotein receptor-related protein associated protein 1

RAB18	RAB18, member RAS oncogene family
GJC1	gap junction protein, gamma 1, 45kDa
CMIP	C-Maf-inducing protein

* E = endometriosis

4B. Early Secretory Phase 100% Accuracy Disease and Severity Classifiers

4B.1. Core genes Disease Classifier Family: First Binary Decision ([NE.NUPP] vs. [E + NE.UPP]*)

Gene.Symbol	Gene.Title
LYZ	lysozyme
POSTN	periostin, osteoblast specific factor
APOD	apolipoprotein D
FOSB	FBJ murine osteosarcoma viral oncogene homolog B
S100A8	S100 calcium binding protein A8
HBG1 /// HBG2	hemoglobin, gamma A /// hemoglobin, gamma G
BAI3	brain-specific angiogenesis inhibitor 3
CST1	cystatin SN
CST4	cystatin S
SF1	splicing factor 1
CXCL14	chemokine (C-X-C motif) ligand 14
TAF7L	TAF7-like RNA polymerase II, TATA box binding protein (TBP)-associated factor, 50kDa
CORIN	corin, serine peptidase
IL17RB	interleukin 17 receptor B
GDAP1	ganglioside-induced differentiation-associated protein 1
MUC15	mucin 15, cell surface associated
EGR1	Early growth response 1
LRRC3B	leucine rich repeat containing 3B
EPHB1	EPH receptor B1
PTEN	phosphatase and tensin homolog
TMEM132B	transmembrane protein 132B
NCKAP5	NCK-associated protein 5
NAMPT	Nicotinamide phosphoribosyltransferase
NUS1P3	nuclear undecaprenyl pyrophosphate synthase 1 homolog (S. cerevisiae) pseudogene 3

* NE.NUPP = no endometriosis, no uterine or pelvic pathology; E = endometriosis; NE.UPP = no endometriosis but with other uterine or pelvic pathology.

4B.2. Core genes Disease Classifier Family: Second Binary Decision ([NE.UPP] vs. [E])

Gene.Symbol	Gene.Title
CEL /// LOC100508206	carboxyl ester lipase (bile salt-stimulated lipase) /// bile salt-activated lipase-like
THBS1	thrombospondin 1

HBA1 /// HBA2	hemoglobin, alpha 1 /// hemoglobin, alpha 2
CD52	CD52 molecule
CFTR	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7)
GSTT2	glutathione S-transferase theta 2
GPR64	G protein-coupled receptor 64
CRISP3	cysteine-rich secretory protein 3
HBB	hemoglobin, beta
SLC9A3R2	solute carrier family 9 (sodium/hydrogen exchanger), member 3 regulator 2
ART3	ADP-ribosyltransferase 3
HIST1H2BG	histone cluster 1, H2bg
IGHG1 /// IGHG2 /// IGHM /// IGHV4-31	immunoglobulin heavy constant gamma 1 (G1m marker) /// immunoglobulin heavy constant gamma 2 (G2m marker) /// immunoglobulin heavy constant mu /// immunoglobulin heavy variable 4-31
HBB	hemoglobin, beta
OLFM4	olfactomedin 4
SOS1	son of sevenless homolog 1 (Drosophila)
MUC5B	mucin 5B, oligomeric mucus/gel-forming
GAL	galanin prepropeptide
IFI44	interferon-induced protein 44
ODAM	odontogenic, ameloblast associated
CATSPERB	cation channel, sperm-associated, beta
AGTR2	angiotensin II receptor, type 2
C15orf48	chromosome 15 open reading frame 48
PPP1R1B	protein phosphatase 1, regulatory (inhibitor) subunit 1B
ZG16B	zymogen granule protein 16 homolog B (rat)
C20orf54	chromosome 20 open reading frame 54
CCDC58	coiled-coil domain containing 58

NE.UPP = no endometriosis but with other uterine or pelvic pathology; E = endometriosis.

4B.3. Core genes Severity Classifier Family: [E*.Min/Mild] vs. [E.Mod/Severe]

Gene.Symbol	Gene.Title
IGF2 /// INS-IGF2	insulin-like growth factor 2 (somatomedin A) /// INS-IGF2 readthrough transcript
FOSB	FBJ murine osteosarcoma viral oncogene homolog B
ALPP	alkaline phosphatase, placental
MSLN	mesothelin
CPA3	carboxypeptidase A3 (mast cell)
PROK1	prokineticin 1
PHACTR2	phosphatase and actin regulator 2

4C. Mid-secretory Phase 91% Accuracy Disease and 100 % Severity Classifiers

4C.1. Core genes MSE 91% Accuracy Disease Classifier Family: First Binary Decision ([NE.NUPP] vs. [E + NE.UPP]*).

Gene Symbol	Gene Title
JAK1	Janus kinase 1
PHF21A	PHD finger protein 21A
CTNNB1	catenin (cadherin-associated protein), beta 1, 88kDa
CBX3	chromobox homolog 3
SLC39A6	solute carrier family 39 (zinc transporter), member 6
CP	ceruloplasmin (ferroxidase)
LUZP1	leucine zipper protein 1
ADAMTS5	ADAM metalloproteinase with thrombospondin type 1 motif, 5
CLIP1	CAP-GLY domain containing linker protein 1
SOCS2-AS1	SOCS2 antisense RNA 1 (non-protein coding)
CACNB2	calcium channel, voltage-dependent, beta 2 subunit
NMRK1	nicotinamide riboside kinase 1
RARA	retinoic acid receptor, alpha
MACC1	metastasis associated in colon cancer 1
ACTR2	ARP2 actin-related protein 2 homolog (yeast)
RERE	arginine-glutamic acid dipeptide (RE) repeats
JUNB	jun B proto-oncogene
EGR1	early growth response 1
TBL1X	transducin (beta)-like 1X-linked
PKP4	plakophilin 4
MX1	myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
TACSTD2	tumor-associated calcium signal transducer 2
SERPINE1	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
EFNB2	ephrin-B2
FOSB	FBJ murine osteosarcoma viral oncogene homolog B
MMP14	matrix metalloproteinase 14 (membrane-inserted)
PRDM2	PR domain containing 2, with ZNF domain
PSD3	pleckstrin and Sec7 domain containing 3
DIO2	deiodinase, iodothyronine, type II
AQP3	aquaporin 3 (Gill blood group)
SLC4A4	solute carrier family 4, sodium bicarbonate cotransporter, member 4
HBA1 /// HBA2	hemoglobin, alpha 1 /// hemoglobin, alpha 2
POMZP3 /// ZP3	POM121 and ZP3 fusion /// zona pellucida glycoprotein 3 (sperm receptor)
EEA1	early endosome antigen 1
MSLN	mesothelin
LYPD3	LY6/PLAUR domain containing 3

FGB	fibrinogen beta chain
ENPP1	ectonucleotide pyrophosphatase/phosphodiesterase 1
CLEC3B /// EXOSC7	C-type lectin domain family 3, member B /// exosome component 7
IGFBP1	insulin-like growth factor binding protein 1
KLK11	kallikrein-related peptidase 11
PIP5K1B	phosphatidylinositol-4-phosphate 5-kinase, type I, beta
MMP10	matrix metalloproteinase 10 (stromelysin 2)
GPR64	G protein-coupled receptor 64
LEFTY2	left-right determination factor 2
CST1	cystatin SN
SPINK1	serine peptidase inhibitor, Kazal type 1
PRLR	prolactin receptor
EPYC	epiphycan
CYP24A1	cytochrome P450, family 24, subfamily A, polypeptide 1
TRPC6	transient receptor potential cation channel, subfamily C, member 6
SOGA1	suppressor of glucose, autophagy associated 1
CRISP3	cysteine-rich secretory protein 3
CDC42	cell division cycle 42 (GTP binding protein, 25kDa)
CADM1	cell adhesion molecule 1
HBB	hemoglobin, beta
FOS	FBJ murine osteosarcoma viral oncogene homolog
CHI3L1	chitinase 3-like 1 (cartilage glycoprotein-39)
ABAT	4-aminobutyrate aminotransferase
CTSZ	cathepsin Z
UPK1B	uroplakin 1B
POMZP3	POM121 and ZP3 fusion
IL6ST	interleukin 6 signal transducer (gp130, oncostatin M receptor)
NF1	neurofibromin 1
DHX9	DEAH (Asp-Glu-Ala-His) box polypeptide 9
EIF1	eukaryotic translation initiation factor 1
SECISBP2L	SECIS binding protein 2-like
MFAP4	microfibrillar-associated protein 4
SOS1	son of sevenless homolog 1 (Drosophila)
MFAP5	microfibrillar associated protein 5
LRRC15	leucine rich repeat containing 15
SST	somatostatin
ID2 /// ID2B	inhibitor of DNA binding 2, dominant negative helix-loop-helix protein /// inhibitor of DNA binding 2B, dominant negative helix-loop-helix protein (pseudogene)
CTBP1	C-terminal binding protein 1

CYP2C9	cytochrome P450, family 2, subfamily C, polypeptide 9
HSPA12A	heat shock 70kDa protein 12A
TWISTNB	TWIST neighbor
GUSBP3 /// GUSBP9 /// SMA4 /// SMA5	glucuronidase, beta pseudogene 3 /// glucuronidase, beta pseudogene 9 /// glucuronidase, beta pseudogene /// glucuronidase, beta pseudogene
DYRK1B	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1B
ATP13A3	ATPase type 13A3
CHODL	chondrolectin
ALDH8A1	aldehyde dehydrogenase 8 family, member A1
TGFB2	transforming growth factor, beta 2
SETD2	SET domain containing 2
UGCG	UDP-glucose ceramide glucosyltransferase
ABHD2	abhydrolase domain containing 2
VPS35	vacuolar protein sorting 35 homolog (S. cerevisiae)
ZCCHC2	zinc finger, CCHC domain containing 2
TEX101	testis expressed 101
NUPL1	nucleoporin like 1
ANGPTL1	angiopoietin-like 1
LOC100507645 /// MALAT1	uncharacterized LOC100507645 /// metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
WASF2	WAS protein family, member 2
CPEB4	cytoplasmic polyadenylation element binding protein 4
SLAIN2	SLAIN motif family, member 2
BTBD7	BTB (POZ) domain containing 7
EDIL3	EGF-like repeats and discoidin I-like domains 3
FBXO32	F-box protein 32
CUX1	cut-like homeobox 1
ITGB6	integrin, beta 6
ZNF800	zinc finger protein 800
C12orf35	chromosome 12 open reading frame 35
HS3ST3B1	heparan sulfate (glucosamine) 3-O-sulfotransferase 3B1
LOC100653132	uncharacterized LOC100653132
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
SORCS1	sortilin-related VPS10 domain containing receptor 1
CAPN8	calpain 8
IHH	Indian hedgehog
DDX17	DEAD (Asp-Glu-Ala-Asp) box helicase 17
FER	fer (fps/fes related) tyrosine kinase
U2AF1	U2 small nuclear RNA auxiliary factor 1
LOC100287497 ///	uncharacterized LOC100287497 /// uncharacterized LOC100287934

LOC100287934	
BOD1L1	biorientation of chromosomes in cell division 1-like 1
RAB12	RAB12, member RAS oncogene family
GALNTL2	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase-like 2
LOC100505989	uncharacterized LOC100505989
LOC100506582	uncharacterized LOC100506582
CLK4	CDC-like kinase 4
HECTD1	HECT domain containing E3 ubiquitin protein ligase 1
ZNF24	Zinc finger protein 24
PHKB	phosphorylase kinase, beta
NIPBL	Nipped-B homolog (Drosophila)
TMED8	transmembrane emp24 protein transport domain containing 8
PHACTR2	phosphatase and actin regulator 2

4C.2. Core genes MSE 91% Accuracy Disease Classifier Family: Second Binary Decision (NE.UPP vs. E*).

Gene Symbol	Gene Title
CDC42SE2	CDC42 small effector 2
CDYL2	chromodomain protein, Y-like 2
WBSCR27	Williams Beuren syndrome chromosome region 27
CEL	carboxyl ester lipase (bile salt-stimulated lipase)
NT5E	5'-nucleotidase, ecto (CD73)
C1orf210	chromosome 1 open reading frame 210
ZBED1	zinc finger, BED-type containing 1
CYP4B1	cytochrome P450, family 4, subfamily B, polypeptide 1
LINC00476	long intergenic non-protein coding RNA 476
CP	ceruloplasmin (ferroxidase)
LOC201477	uncharacterized LOC201477
SLC8A1	solute carrier family 8 (sodium/calcium exchanger), member 1
SYTL3	synaptotagmin-like 3
DEFB124	defensin, beta 124
SERPINE1	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
DACT2	dapper, antagonist of beta-catenin, homolog 2 (Xenopus laevis)
BCLAF1	BCL2-associated transcription factor 1
ATP1B1	ATPase, Na ⁺ /K ⁺ transporting, beta 1 polypeptide
LTF	lactotransferrin
CPNE3	copine III

ITPR2	inositol 1,4,5-trisphosphate receptor, type 2
S100A8	S100 calcium binding protein A8
STMN2	stathmin-like 2
MYO6	myosin VI
ATXN1	ataxin 1
HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1
F13A1	coagulation factor XIII, A1 polypeptide
ABP1	amiloride binding protein 1 (amine oxidase (copper-containing))
FGFR2	fibroblast growth factor receptor 2
PLA2G2A	phospholipase A2, group IIA (platelets, synovial fluid)
HMOX1	heme oxygenase (decycling) 1
PRKAR2B	protein kinase, cAMP-dependent, regulatory, type II, beta
PCYOX1	prenylcysteine oxidase 1
PCCA	propionyl CoA carboxylase, alpha polypeptide
VCAM1	vascular cell adhesion molecule 1
HNMT	histamine N-methyltransferase
POMZP3 /// ZP3	POM121 and ZP3 fusion /// zona pellucida glycoprotein 3 (sperm receptor)
S100A2	S100 calcium binding protein A2
FGFR3	fibroblast growth factor receptor 3
KYNU	kynureninase
ACPP	acid phosphatase, prostate
MMP1	matrix metalloproteinase 1 (interstitial collagenase)
MAL	mal, T-cell differentiation protein
ORM1	orosomucoid 1
ORM1 /// ORM2	orosomucoid 1 /// orosomucoid 2
CFTR	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7)
PSPH	phosphoserine phosphatase
SLC26A2	solute carrier family 26 (sulfate transporter), member 2
CXCL13	chemokine (C-X-C motif) ligand 13
TMSB15A /// TMSB15B	thymosin beta 15a /// thymosin beta 15B
MST1R	macrophage stimulating 1 receptor (c-met-related tyrosine kinase)
PPP1R1A	protein phosphatase 1, regulatory (inhibitor) subunit 1A
PCSK5	proprotein convertase subtilisin/kexin type 5

RASGRP1	RAS guanyl releasing protein 1 (calcium and DAG-regulated)
MMP10	matrix metalloproteinase 10 (stromelysin 2)
BCL2A1	BCL2-related protein A1
ABLIM3	actin binding LIM protein family, member 3
CYP3A5	cytochrome P450, family 3, subfamily A, polypeptide 5
LEFTY2	left-right determination factor 2
CST1	cystatin SN
SPINK1	serine peptidase inhibitor, Kazal type 1
GRP	gastrin-releasing peptide
SLC1A1	solute carrier family 1 (neuronal/epithelial high affinity glutamate transporter, system Xag), member 1
CDH16	cadherin 16, KSP-cadherin
GAGE12B /// GAGE12C /// GAGE12D /// GAGE12E /// GAGE12F /// GAGE12G /// GAGE12H /// GAGE12I /// GAGE2A /// GAGE2B /// GAGE2C /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7	G antigen 12B /// G antigen 12C /// G antigen 12D /// G antigen 12E /// G antigen 12F /// G antigen 12G /// G antigen 12H /// G antigen 12I /// G antigen 2A /// G antigen 2B /// G antigen 2C /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7
HOXC6	homeobox C6
NFIC	nuclear factor I/C (CCAAT-binding transcription factor)
GABRA2	gamma-aminobutyric acid (GABA) A receptor, alpha 2
CSF2RA	colony stimulating factor 2 receptor, alpha, low-affinity (granulocyte-macrophage)
GAGE1 /// GAGE12B /// GAGE12C /// GAGE12D /// GAGE12E /// GAGE12F /// GAGE12G /// GAGE12H /// GAGE12I /// GAGE12J /// GAGE2A /// GAGE2B /// GAGE2C /// GAGE2D /// GAGE2E /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7 /// GAGE8	G antigen 1 /// G antigen 12B /// G antigen 12C /// G antigen 12D /// G antigen 12E /// G antigen 12F /// G antigen 12G /// G antigen 12H /// G antigen 12I /// G antigen 12J /// G antigen 2A /// G antigen 2B /// G antigen 2C /// G antigen 2D /// G antigen 2E /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7 /// G antigen 8
FAM107A /// LOC100506924	family with sequence similarity 107, member A /// uncharacterized LOC100506924
GAGE3	G antigen 3
GAGE1 /// GAGE12C /// GAGE12D /// GAGE12E /// GAGE12F /// GAGE12G /// GAGE12H /// GAGE12I /// GAGE12J /// GAGE2A /// GAGE2B /// GAGE2C /// GAGE2D /// GAGE2E /// GAGE3 /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7 /// GAGE8	G antigen 1 /// G antigen 12C /// G antigen 12D /// G antigen 12E /// G antigen 12F /// G antigen 12G /// G antigen 12H /// G antigen 12I /// G antigen 12J /// G antigen 2A /// G antigen 2B /// G antigen 2C /// G antigen 2D /// G antigen 2E /// G antigen 3 /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7 /// G antigen 8

GAST	gastrin
GAGE1 /// GAGE12C /// GAGE12D /// GAGE12E /// GAGE12F /// GAGE12G /// GAGE12H /// GAGE12I /// GAGE12J /// GAGE2D /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7	G antigen 1 /// G antigen 12C /// G antigen 12D /// G antigen 12E /// G antigen 12F /// G antigen 12G /// G antigen 12H /// G antigen 12I /// G antigen 12J /// G antigen 2D /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7
GAGE12F /// GAGE12G /// GAGE12I /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7	G antigen 12F /// G antigen 12G /// G antigen 12I /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7
DMBT1	deleted in malignant brain tumors 1
WNT4	wingless-type MMTV integration site family, member 4
TOP1	topoisomerase (DNA) I
HBB	hemoglobin, beta
NR2F2	nuclear receptor subfamily 2, group F, member 2
KLHDC10	kelch domain containing 10
LAMB3	laminin, beta 3
HLA-DQB1	major histocompatibility complex, class II, DQ beta 1
PNMA2	paraneoplastic Ma antigen 2
ADH1B	alcohol dehydrogenase 1B (class I), beta polypeptide
HLA-DRB4 /// LOC100509582	major histocompatibility complex, class II, DR beta 4 /// HLA class II histocompatibility antigen, DR beta 4 chain-like
CRISP2	cysteine-rich secretory protein 2
MT1G	Metallothionein 1G
RORA	RAR-related orphan receptor A
CYR61	cysteine-rich, angiogenic inducer, 61
POMZP3	POM121 and ZP3 fusion
LEPR	leptin receptor
KIR3DL1	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1
CXCR4	chemokine (C-X-C motif) receptor 4
PRRC2C	proline-rich coiled-coil 2C
IGFBP3	insulin-like growth factor binding protein 3
SULF1	sulfatase 1
MFAP4	microfibrillar-associated protein 4
OLFM4	olfactomedin 4
IGHM	immunoglobulin heavy constant mu
APOE	Apolipoprotein E
HLA-DQB1 /// LOC100293977	major histocompatibility complex, class II, DQ beta 1 /// HLA class II histocompatibility antigen, DQ beta 1 chain-like

LTBP4	latent transforming growth factor beta binding protein 4
MUC5B	mucin 5B, oligomeric mucus/gel-forming
CFH	complement factor H
HLA-DQA1 /// LOC100507718 /// LOC100509457	major histocompatibility complex, class II, DQ alpha 1 /// HLA class II histocompatibility antigen, DQ alpha 1 chain-like /// HLA class II histocompatibility antigen, DQ alpha 1 chain-like
EEF1E1	Eukaryotic translation elongation factor 1 epsilon 1
CTCF	CCCTC-binding factor (zinc finger protein)
CYP2C9	cytochrome P450, family 2, subfamily C, polypeptide 9
ADAMTS2	ADAM metalloproteinase with thrombospondin type 1 motif, 2
CDC42BPA	CDC42 binding protein kinase alpha (DMPK-like)
CFH /// CFHR1	complement factor H /// complement factor H-related 1
DACT1	dapper, antagonist of beta-catenin, homolog 1 (Xenopus laevis)
FAM118A	family with sequence similarity 118, member A
HPCAL4	hippocalcin like 4
DCAF16	DDB1 and CUL4 associated factor 16
BCMO1	beta-carotene 15,15'-monooxygenase 1
SPDEF	SAM pointed domain containing ets transcription factor
CATSPERB	catsper channel auxiliary subunit beta
LRRC31	leucine rich repeat containing 31
ST6GALNAC5	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 5
COLEC12	collectin sub-family member 12
HLA-DRB1 /// HLA-DRB3 /// HLA-DRB4 /// HLA-DRB5 /// LOC100507709 /// LOC100507714 /// LOC100509582	major histocompatibility complex, class II, DR beta 1 /// major histocompatibility complex, class II, DR beta 3 /// major histocompatibility complex, class II, DR beta 4 /// major histocompatibility complex, class II, DR beta 5 /// HLA class II histocompatibility antigen, DRB1-7 beta chain-like /// HLA class II histocompatibility antigen, DRB1-7 beta chain-like /// HLA class II histocompatibility antigen, DR beta 4 chain-like
LOC100653010	uncharacterized LOC100653010
GDF15	growth differentiation factor 15
SIKE1	suppressor of IKBKE 1
TFG	TRK-fused gene

PTER	phosphotriesterase related
COL4A3BP	collagen, type IV, alpha 3 (Goodpasture antigen) binding protein
CFC1 /// CFC1B	cripto, FRL-1, cryptic family 1 /// cripto, FRL-1, cryptic family 1B
SLC46A2	solute carrier family 46, member 2
MS4A8B	membrane-spanning 4-domains, subfamily A, member 8B
H19 /// MIR675	H19, imprinted maternally expressed transcript (non-protein coding) /// microRNA 675
LIFR	leukemia inhibitory factor receptor alpha
COL12A1	collagen, type XII, alpha 1
BPIFB1	BPI fold containing family B, member 1
DNER	delta/notch-like EGF repeat containing
MEGF6	multiple EGF-like-domains 6
CCDC146	coiled-coil domain containing 146
TAOK1	TAO kinase 1
ERAP2	endoplasmic reticulum aminopeptidase 2
LOC100505806	uncharacterized LOC100505806
NAPSB	napsin B aspartic peptidase pseudogene
ZG16B	zymogen granule protein 16 homolog B (rat)
IGSF11	immunoglobulin superfamily, member 11
NFYA	nuclear transcription factor Y, alpha
LOC100506029 /// LOC100506051	uncharacterized LOC100506029 /// uncharacterized LOC100506051
THRB	thyroid hormone receptor, beta
CYS1	cystin 1
MCTP2	multiple C2 domains, transmembrane 2
NPAS3	neuronal PAS domain protein 3
C20orf85	chromosome 20 open reading frame 85
FAM69C	family with sequence similarity 69, member C
SCARA5	scavenger receptor class A, member 5 (putative)
FNDC3B	fibronectin type III domain containing 3B
PI15	peptidase inhibitor 15
SCGB3A1	secretoglobin, family 3A, member 1
KLF9	Kruppel-like factor 9
GBP1	guanylate binding protein 1, interferon-inducible
MAVS	mitochondrial antiviral signaling protein
ANKRD33B	ankyrin repeat domain 33B
SNORD3B-1 /// SNORD3B-2 /// SNORD3D	small nucleolar RNA, C/D box 3B-1 /// small nucleolar RNA, C/D box 3B-2 /// small nucleolar RNA, C/D box 3D
FAM178A	family with sequence similarity 178, member A

THAP6	THAP domain containing 6
LOC100422737	uncharacterized LOC100422737
SCARA5	scavenger receptor class A, member 5 (putative)
SUZ12P	Suppressor of zeste 12 homolog pseudogene
BCL2L10	BCL2-like 10 (apoptosis facilitator)
RIMKLB	ribosomal modification protein rimK-like family member B
PLEKHA2	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2
EIF4E3	eukaryotic translation initiation factor 4E family member 3
SGPP2	sphingosine-1-phosphate phosphatase 2
RAB3IP	RAB3A interacting protein (rabin3)
DOK7	docking protein 7
MIB2	mindbomb E3 ubiquitin protein ligase 2
LOC100653229	uncharacterized LOC100653229
ITGB8	integrin, beta 8
WDR38	WD repeat domain 38
SHISA8	shisa homolog 8 (<i>Xenopus laevis</i>)

NE.NUPP = no endometriosis, no uterine or pelvic pathology

NE.UPP = no endometriosis, but with uterine or pelvic pathology

E = endometriosis

4C.3. Core Genes MSE 100% Accuracy Severity Classifier Family: E.Min/Mild vs. E.Mod/Severe*

Gene Symbol	Gene Title
HSPA6	heat shock 70kDa protein 6 (HSP70B')
THRA	thyroid hormone receptor, alpha
GIMAP1	GTPase, IMAF family member 1
TIRAP	toll-interleukin 1 receptor (TIR) domain containing adaptor protein
ACVR1C	activin A receptor, type IC
IL12RB1	interleukin 12 receptor, beta 1
JAK1	Janus kinase 1
RAD51L3-RFFL /// RFFL	RAD51L3-RFFL readthrough /// ring finger and FYVE-like domain containing E3 ubiquitin protein ligase
ZNF417	zinc finger protein 417
SEC62	SEC62 homolog (<i>S. cerevisiae</i>)
SIGLEC10	sialic acid binding Ig-like lectin 10
KCNG3	potassium voltage-gated channel, subfamily G, member 3
CD300LF	CD300 molecule-like family member f
MOGAT1	monoacylglycerol O-acyltransferase 1
SLC5A3	solute carrier family 5 (sodium/myo-inositol cotransporter),

	member 3
FOXC1	forkhead box C1
PRF1	perforin 1 (pore forming protein)
WBSR27	Williams Beuren syndrome chromosome region 27
ARSB	arylsulfatase B
CCDC60	coiled-coil domain containing 60
COCH	coagulation factor C homolog, cochlin (Limulus polyphemus)
SLC25A48	solute carrier family 25, member 48
CELF2	CUGBP, Elav-like family member 2
DUOXA1	dual oxidase maturation factor 1
METTL8	methyltransferase like 8
TACC1	transforming, acidic coiled-coil containing protein 1
TBC1D16	TBC1 domain family, member 16
ZBED1	zinc finger, BED-type containing 1
DOK5	docking protein 5
FCER1G	Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide
ATF3	activating transcription factor 3
FCHO2	FCH domain only 2
CCNL1	cyclin L1
CYP4B1	cytochrome P450, family 4, subfamily B, polypeptide 1
CLEC7A	C-type lectin domain family 7, member A
TRIB3	tribbles homolog 3 (Drosophila)
LOC284454	uncharacterized LOC284454
CACNA1D	calcium channel, voltage-dependent, L type, alpha 1D subunit
DIAPH3-AS1	DIAPH3 antisense RNA 1 (non-protein coding)
LOC100506523 /// ZNF814	uncharacterized LOC100506523 /// zinc finger protein 814
RPPH1	ribonuclease P RNA component H1
SERPINB6	serpin peptidase inhibitor, clade B (ovalbumin), member 6
LEPR	leptin receptor
LOC100507250	uncharacterized LOC100507250
LOC100506258	uncharacterized LOC100506258
ACSL4	Acyl-CoA synthetase long-chain family member 4
BIN3	bridging integrator 3
PTRF	polymerase I and transcript release factor
ZKSCAN1	zinc finger with KRAB and SCAN domains 1
ZNF587 /// ZNF587B	zinc finger protein 587 /// zinc finger protein 587B
MIR1204 /// PVT1	microRNA 1204 /// Pvt1 oncogene (non-protein coding)
ZDHHC18	zinc finger, DHHC-type containing 18

SIRT2	sirtuin 2
AHNAK2	AHNAK nucleoprotein 2
C1orf53	chromosome 1 open reading frame 53
LOC100507645 /// MALAT1	uncharacterized LOC100507645 /// metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
ZNF321P /// ZNF816 /// ZNF816-ZNF321P	zinc finger protein 321, pseudogene /// zinc finger protein 816 /// ZNF816-ZNF321P readthrough
CACNB2	calcium channel, voltage-dependent, beta 2 subunit
LOC642852	uncharacterized LOC642852
FLJ38717	FLJ38717 protein
SFXN3	Sideroflexin 3
LOC100506387	uncharacterized LOC100506387
LOC201477	uncharacterized LOC201477
SLC8A1	solute carrier family 8 (sodium/calcium exchanger), member 1
KIAA1908	uncharacterized LOC114796
SF3B14	Splicing factor 3B, 14 kDa subunit
OR7D2	olfactory receptor, family 7, subfamily D, member 2
TNRC18	trinucleotide repeat containing 18
LOC100630923	LOC100289561-PRKRIP1 readthrough
ATF1	activating transcription factor 1
IKZF1	IKAROS family zinc finger 1 (Ikaros)
PNN	pinin, desmosome associated protein
CD74	CD74 molecule, major histocompatibility complex, class II invariant chain
PAAF1	proteasomal ATPase-associated factor 1
BRE-AS1	BRE antisense RNA 1 (non-protein coding)
LINC00240	long intergenic non-protein coding RNA 240
ANKRD20A1 /// ANKRD20A11P /// ANKRD20A2 /// ANKRD20A3 /// ANKRD20A4 /// ANKRD20A5P /// ANKRD20A9P /// LOC644339	ankyrin repeat domain 20 family, member A1 /// ankyrin repeat domain 20 family, member A11, pseudogene /// ankyrin repeat domain 20 family, member A2 /// ankyrin repeat domain 20 family, member A3 /// ankyrin repeat domain 20 family, member A4 /// ankyrin repeat domain 20 family, member A5, pseudogene /// ankyrin repeat domain 20 family, member A9, pseudogene /// ankyrin repeat domain-containing protein 20B-like
CATSPERB	catsper channel auxiliary subunit beta
SCD	stearoyl-CoA desaturase (delta-9-desaturase)
DHCR24	24-dehydrocholesterol reductase
DUSP1	dual specificity phosphatase 1
CYR61	cysteine-rich, angiogenic inducer, 61
NREP	neuronal regeneration related protein homolog (rat)

GPX3	glutathione peroxidase 3 (plasma)
MYH11	myosin, heavy chain 11, smooth muscle
ZFP36	zinc finger protein 36, C3H type, homolog (mouse)
INSIG1	insulin induced gene 1
TNC	tenascin C
ACSL3	acyl-CoA synthetase long-chain family member 3
NIPSNAP1	nipsnap homolog 1 (C. elegans)
ENG	endoglin
CPD	carboxypeptidase D
PPP1R12B	protein phosphatase 1, regulatory subunit 12B
LTF	lactotransferrin
DKK3	dickkopf 3 homolog (Xenopus laevis)
AMFR	autocrine motility factor receptor, E3 ubiquitin protein ligase
NR4A1	nuclear receptor subfamily 4, group A, member 1
COL1A2	collagen, type I, alpha 2
IGF2 /// INS-IGF2	insulin-like growth factor 2 (somatomedin A) /// INS-IGF2 readthrough
KIAA0101	KIAA0101
DHFR	dihydrofolate reductase
NRIP1	nuclear receptor interacting protein 1
ICAM1	intercellular adhesion molecule 1
SERTAD2	SERTA domain containing 2
GPX2	glutathione peroxidase 2 (gastrointestinal)
ANPEP	alanyl (membrane) aminopeptidase
ADM	adrenomedullin
SOX9	SRY (sex determining region Y)-box 9
CAPN6	calpain 6
STMN2	stathmin-like 2
FH	fumarate hydratase
C2	complement component 2
FBN2	fibrillin 2
ST3GAL5	ST3 beta-galactoside alpha-2,3-sialyltransferase 5
TLE1	transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)
ATXN1	ataxin 1
FCGBP	Fc fragment of IgG binding protein
CDH3	cadherin 3, type 1, P-cadherin (placental)
HLA-DQA1	major histocompatibility complex, class II, DQ alpha 1
PSD3	pleckstrin and Sec7 domain containing 3
EPN2	epsin 2

S100A9	S100 calcium binding protein A9
KLF9	Kruppel-like factor 9
LOXL1	lysyl oxidase-like 1
CSF3R	colony stimulating factor 3 receptor (granulocyte)
GPRC5B	G protein-coupled receptor, family C, group 5, member B
PLA2G2A	phospholipase A2, group IIA (platelets, synovial fluid)
BCL2	B-cell CLL/lymphoma 2
PI3	peptidase inhibitor 3, skin-derived
PDE4B	phosphodiesterase 4B, cAMP-specific
MPZL2	myelin protein zero-like 2
SEMA3C	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C
PCGF2	polycomb group ring finger 2
GSTT1	glutathione S-transferase theta 1
TSPAN8	tetraspanin 8
SCG5	secretogranin V (7B2 protein)
MMP9	matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)
HBA1 /// HBA2	hemoglobin, alpha 1 /// hemoglobin, alpha 2
RFC4	replication factor C (activator 1) 4, 37kDa
CTAGE5	CTAGE family, member 5
AGAP1	ArfGAP with GTPase domain, ankyrin repeat and PH domain 1
PRAME	preferentially expressed antigen in melanoma
IL2RG	interleukin 2 receptor, gamma
GADD45G	growth arrest and DNA-damage-inducible, gamma
GSTM4	glutathione S-transferase mu 4
ENPP4	ectonucleotide pyrophosphatase/phosphodiesterase 4 (putative)
CD37	CD37 molecule
S100A2	S100 calcium binding protein A2
SKI	v-ski sarcoma viral oncogene homolog (avian)
FARS2	phenylalanyl-tRNA synthetase 2, mitochondrial
PROM1	prominin 1
AK4 /// LOC100507855	adenylate kinase 4 /// adenylate kinase isoenzyme 4, mitochondrial-like
SLC43A1	solute carrier family 43, member 1
GSTM2	glutathione S-transferase mu 2 (muscle)
FOLR1	folate receptor 1 (adult)
IFI44L	interferon-induced protein 44-like
MMP1	matrix metalloproteinase 1 (interstitial collagenase)

CDC7	cell division cycle 7 homolog (<i>S. cerevisiae</i>)
TOX	thymocyte selection-associated high mobility group box
CXCL10	chemokine (C-X-C motif) ligand 10
GABRE /// MIR224 /// MIR452	gamma-aminobutyric acid (GABA) A receptor, epsilon /// microRNA 224 /// microRNA 452
GSTM1	glutathione S-transferase mu 1
APOC2 /// APOC4 /// APOC4-APOC2	apolipoprotein C-II /// apolipoprotein C-IV /// APOC4-APOC2 readthrough
ABCG1	ATP-binding cassette, sub-family G (WHITE), member 1
MMP12	matrix metalloproteinase 12 (macrophage elastase)
DKK1	dickkopf 1 homolog (<i>Xenopus laevis</i>)
SERPINF2	serpin peptidase inhibitor, clade B (ovalbumin), member 2
TFF3	trefoil factor 3 (intestinal)
SRD5A1	steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)
ABCA8	ATP-binding cassette, sub-family A (ABC1), member 8
RIMS3	regulating synaptic membrane exocytosis 3
DUSP2	dual specificity phosphatase 2
CKM	creatine kinase, muscle
FOLR2	folate receptor 2 (fetal)
MLH3	mutL homolog 3 (<i>E. coli</i>)
ENPEP	glutamyl aminopeptidase (aminopeptidase A)
MSLN	mesothelin
LYPD3	LY6/PLAUR domain containing 3
ASNS	asparagine synthetase (glutamine-hydrolyzing)
PSPH	phosphoserine phosphatase
AOX1	aldehyde oxidase 1
SLC26A2	solute carrier family 26 (sulfate transporter), member 2
CCR1	chemokine (C-C motif) receptor 1
NEFM	neurofilament, medium polypeptide
CCL3 /// CCL3L1 /// CCL3L3	chemokine (C-C motif) ligand 3 /// chemokine (C-C motif) ligand 3-like 1 /// chemokine (C-C motif) ligand 3-like 3
PTGS1	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)
ACTC1	actin, alpha, cardiac muscle 1
ITGB3BP	integrin beta 3 binding protein (beta3-endonexin)
AP1S1	adaptor-related protein complex 1, sigma 1 subunit
HCAR3	hydroxycarboxylic acid receptor 3
SOD3	superoxide dismutase 3, extracellular
LIF	leukemia inhibitory factor
IGFBP1	insulin-like growth factor binding protein 1

TMSB15A /// TMSB15B	thymosin beta 15a /// thymosin beta 15B
GGCX	gamma-glutamyl carboxylase
CBR3	carbonyl reductase 3
PRSS2	protease, serine, 2 (trypsin 2)
SLC22A3	solute carrier family 22 (extraneuronal monoamine transporter), member 3
GSTT2	glutathione S-transferase theta 2
PRL	prolactin
MST1R	macrophage stimulating 1 receptor (c-met-related tyrosine kinase)
CD3E	CD3e molecule, epsilon (CD3-TCR complex)
KLK11	kallikrein-related peptidase 11
GZMA	granzyme A (granzyme 1, cytotoxic T-lymphocyte-associated serine esterase 3)
GNLY	granulysin
AVIL	advillin
BPI	bactericidal/permeability-increasing protein
HRH1	histamine receptor H1
NOS3	nitric oxide synthase 3 (endothelial cell)
OLFM1	olfactomedin 1
C4BPA	complement component 4 binding protein, alpha
OASL	2'-5'-oligoadenylate synthetase-like
TPSAB1	tryptase alpha/beta 1
SYNGR3	synaptogyrin 3
CBLN1	cerebellin 1 precursor
CD8A	CD8a molecule
CYP3A5	cytochrome P450, family 3, subfamily A, polypeptide 5
WISP2	WNT1 inducible signaling pathway protein 2
CD2	CD2 molecule
PART1	prostate androgen-regulated transcript 1 (non-protein coding)
SLC7A4	solute carrier family 7 (orphan transporter), member 4
GABBR1 /// UBD	gamma-aminobutyric acid (GABA) B receptor, 1 /// ubiquitin D
SLC22A4	solute carrier family 22 (organic cation/ergothioneine transporter), member 4
PLCL1	phospholipase C-like 1
EPHA1	EPH receptor A1
HABP2	hyaluronan binding protein 2
LEFTY2	left-right determination factor 2
TNFAIP6	tumor necrosis factor, alpha-induced protein 6

ACADL	acyl-CoA dehydrogenase, long chain
PTPRR	protein tyrosine phosphatase, receptor type, R
LRRC37A3	leucine rich repeat containing 37, member A3
MATN3	matrilin 3
UGT1A1 /// UGT1A10 /// UGT1A3 /// UGT1A4 /// UGT1A5 /// UGT1A6 /// UGT1A7 /// UGT1A8 /// UGT1A9	UDP glucuronosyltransferase 1 family, polypeptide A1 /// UDP glucuronosyltransferase 1 family, polypeptide A10 /// UDP glucuronosyltransferase 1 family, polypeptide A3 /// UDP glucuronosyltransferase 1 family, polypeptide A4 /// UDP glucuronosyltransferase 1 family, polypeptide A5 /// UDP glucuronosyltransferase 1 family, polypeptide A6 /// UDP glucuronosyltransferase 1 family, polypeptide A7 /// UDP glucuronosyltransferase 1 family, polypeptide A8 /// UDP glucuronosyltransferase 1 family, polypeptide A9
KLK8	kallikrein-related peptidase 8
CYP4F11	cytochrome P450, family 4, subfamily F, polypeptide 11
ARHGAP6	Rho GTPase activating protein 6
IL13RA2	interleukin 13 receptor, alpha 2
CST1	cystatin SN
MMP17	matrix metalloproteinase 17 (membrane-inserted)
ARHGAP22	Rho GTPase activating protein 22
FAM155B	family with sequence similarity 155, member B
PTHLH	parathyroid hormone-like hormone
SPINK2	serine peptidase inhibitor, Kazal type 2 (acrosin-trypsin inhibitor)
GRP	gastrin-releasing peptide
CXCL6	chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)
COX6A2	cytochrome c oxidase subunit VIa polypeptide 2
XCL1	chemokine (C motif) ligand 1
SCGB2A2	secretoglobin, family 2A, member 2
PF4	platelet factor 4
B4GALNT1	beta-1,4-N-acetyl-galactosaminyl transferase 1
S1PR4	sphingosine-1-phosphate receptor 4
LTC4S	leukotriene C4 synthase
ABAT	4-aminobutyrate aminotransferase
AKR1B10	aldo-keto reductase family 1, member B10 (aldose reductase)
LY96	lymphocyte antigen 96
SLC16A5	solute carrier family 16, member 5 (monocarboxylic acid transporter 6)
ZMYM5	zinc finger, MYM-type 5
GP2	glycoprotein 2 (zymogen granule membrane)

FAM65B	family with sequence similarity 65, member B
CRYBB2 /// CRYBB2P1	crystallin, beta B2 /// crystallin, beta B2 pseudogene 1
WISP1	WNT1 inducible signaling pathway protein 1
PAEP	progestagen-associated endometrial protein
IL11	interleukin 11
BGLAP /// PMF1-BGLAP	bone gamma-carboxyglutamate (gla) protein /// PMF1-BGLAP readthrough
TNF	tumor necrosis factor
TPSB2	tryptase beta 2 (gene/pseudogene)
DIO3	deiodinase, iodothyronine, type III
ALOX12	arachidonate 12-lipoxygenase
CD300C	CD300c molecule
CD209	CD209 molecule
KIR3DL1 /// KIR3DL2 /// LOC727787	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1 /// killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2 /// killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2-like
KIR3DL2 /// LOC727787	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2 /// killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2-like
DEFB4A /// DEFB4B	defensin, beta 4A /// defensin, beta 4B
RAC2	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)
GZMM	granzyme M (lymphocyte met-ase 1)
PIR	pirin (iron-binding nuclear protein)
BDKRB1	bradykinin receptor B1
GADD45B	growth arrest and DNA-damage-inducible, beta
PSG9	pregnancy specific beta-1-glycoprotein 9
GAGE1 /// GAGE12C /// GAGE12D /// GAGE12E /// GAGE12F /// GAGE12G /// GAGE12H /// GAGE12I /// GAGE12J /// GAGE2A /// GAGE2B /// GAGE2C /// GAGE2D /// GAGE2E /// GAGE3 /// GAGE4 /// GAGE5 /// GAGE6 /// GAGE7 /// GAGE8	G antigen 1 /// G antigen 12C /// G antigen 12D /// G antigen 12E /// G antigen 12F /// G antigen 12G /// G antigen 12H /// G antigen 12I /// G antigen 12J /// G antigen 2A /// G antigen 2B /// G antigen 2C /// G antigen 2D /// G antigen 2E /// G antigen 3 /// G antigen 4 /// G antigen 5 /// G antigen 6 /// G antigen 7 /// G antigen 8
FGFR1	fibroblast growth factor receptor 1
MUC1	mucin 1, cell surface associated
KRT13	keratin 13
NFAT5	nuclear factor of activated T-cells 5, tonicity-responsive
LINC00597	long intergenic non-protein coding RNA 597
KIR2DS3	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 3

PTGIS	prostaglandin I2 (prostacyclin) synthase
GAST	gastrin
KIR2DS1	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 1
KIR2DS5	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 5
DMBT1	deleted in malignant brain tumors 1
TH	tyrosine hydroxylase
ANK1	ankyrin 1, erythrocytic
KIR2DL2 /// KIR2DL4 /// KIR2DL5A /// KIR2DL5B /// KIR3DL3 /// KIR3DS1 /// LOC100287534	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 2 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 5A /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 5B /// killer cell immunoglobulin-like receptor three domains long cytoplasmic tail 3 /// killer cell immunoglobulin-like receptor, three domains, short cytoplasmic tail, 1 /// killer cell immunoglobulin-like receptor 2DL4-like
RASA4 /// RASA4B /// RASA4CP /// UPK3BL	RAS p21 protein activator 4 /// RAS p21 protein activator 4B /// RAS p21 protein activator 4C, pseudogene /// uroplakin 3B-like
WNT4	wingless-type MMTV integration site family, member 4
AP3D1	adaptor-related protein complex 3, delta 1 subunit
LGALS8	lectin, galactoside-binding, soluble, 8
UPF1	UPF1 regulator of nonsense transcripts homolog (yeast)
KRT7	keratin 7
CORO1A	coronin, actin binding protein, 1A
UBN1	ubiquitin 1
HBB	hemoglobin, beta
AKR1C3	aldo-keto reductase family 1, member C3 (3-alpha hydroxysteroid dehydrogenase, type II)
FOS	FBJ murine osteosarcoma viral oncogene homolog
TFPI2	tissue factor pathway inhibitor 2
CA2	carbonic anhydrase II
AZGP1	alpha-2-glycoprotein 1, zinc-binding
RGS16	regulator of G-protein signaling 16
MALL	mal, T-cell differentiation protein-like
SCAF11	SR-related CTD-associated factor 11
DLK1	delta-like 1 homolog (Drosophila)
CES1 /// LOC100653057	carboxylesterase 1 /// liver carboxylesterase 1-like
HLA-DRB4 /// LOC100509582	major histocompatibility complex, class II, DR beta 4 /// HLA class II histocompatibility antigen, DR beta 4 chain-like

NR1D2	nuclear receptor subfamily 1, group D, member 2
RRM2	ribonucleotide reductase M2
CXCL2	chemokine (C-X-C motif) ligand 2
CASP6	caspase 6, apoptosis-related cysteine peptidase
KLK10	kallikrein-related peptidase 10
TARP	TCR gamma alternate reading frame protein
SPP1	secreted phosphoprotein 1
TNNC1	troponin C type 1 (slow)
TGFB2	transforming growth factor, beta 2
SLC7A11	solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11
CD247	CD247 molecule
RND1	Rho family GTPase 1
MAPK13	mitogen-activated protein kinase 13
UPK1B	uroplakin 1B
ARC	activity-regulated cytoskeleton-associated protein
CYP4B1	cytochrome P450, family 4, subfamily B, polypeptide 1
PLA2G4A	phospholipase A2, group IVA (cytosolic, calcium-dependent)
GZMB	granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1)
IRX5	iroquois homeobox 5
DLG5	discs, large homolog 5 (Drosophila)
CTAG1A /// CTAG1B	cancer/testis antigen 1A /// cancer/testis antigen 1B
CCL23	chemokine (C-C motif) ligand 23
LAIR1	leukocyte-associated immunoglobulin-like receptor 1
NRTN	neurturin
CLDN14	claudin 14
SLC43A3	solute carrier family 43, member 3
NCR3	natural cytotoxicity triggering receptor 3
POSTN	periostin, osteoblast specific factor
KIR2DL1 /// KIR2DL2 /// KIR2DL3 /// KIR2DL4 /// KIR2DL5A /// KIR2DL5B /// KIR3DL3 /// KIR3DS1 /// LOC100287534 /// LOC100653050	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 1 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 2 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 3 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4 /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 5A /// killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 5B /// killer cell immunoglobulin-like receptor three domains long cytoplasmic tail 3 /// killer cell immunoglobulin-like receptor, three domains, short cytoplasmic tail, 1 /// killer

	cell immunoglobulin-like receptor 2DL4-like /// killer cell immunoglobulin-like receptor 2DL2-like
AP3D1	adaptor-related protein complex 3, delta 1 subunit
HLA-DRA	major histocompatibility complex, class II, DR alpha
HGF	hepatocyte growth factor (hepapoietin A; scatter factor)
PSTPIP1	proline-serine-threonine phosphatase interacting protein 1
KIR2DL4	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 4
KIR2DL2	killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 2
MAPK11	mitogen-activated protein kinase 11
KIR2DS1 /// KIR2DS2 /// KIR2DS3 /// KIR2DS4 /// KIR2DS5 /// KIR3DL3	killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 1 /// killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 2 /// killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 3 /// killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 4 /// killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 5 /// killer cell immunoglobulin-like receptor three domains long cytoplasmic tail 3
CEACAM6	carcinoembryonic antigen-related cell adhesion molecule 6 (non-specific cross reacting antigen)
KIR3DL1	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1
PRG2	proteoglycan 2, bone marrow (natural killer cell activator, eosinophil granule major basic protein)
COL4A2	collagen, type IV, alpha 2
HLA-DPA1	major histocompatibility complex, class II, DP alpha 1
WNK1	WNK lysine deficient protein kinase 1
DAG1	dystroglycan 1 (dystrophin-associated glycoprotein 1)
FNBP4	formin binding protein 4
PIK3R1	phosphoinositide-3-kinase, regulatory subunit 1 (alpha)
SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1
CLASP2	cytoplasmic linker associated protein 2
MYO1D	myosin ID
KHNYN	KH and NYN domain containing
SEP6	septin 6
CERS6	ceramide synthase 6
COL5A1	collagen, type V, alpha 1
IL1RN	interleukin 1 receptor antagonist
RASA4 /// RASA4B /// RASA4CP	RAS p21 protein activator 4 /// RAS p21 protein activator 4B /// RAS p21 protein activator 4C, pseudogene

NFATC2IP	nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 interacting protein
PLEKHG3	pleckstrin homology domain containing, family G (with RhoGef domain) member 3
SUPV3L1	suppressor of var1, 3-like 1 (<i>S. cerevisiae</i>)
COL6A1	collagen, type VI, alpha 1
BBX	bobby sox homolog (<i>Drosophila</i>)
GATAD1	GATA zinc finger domain containing 1
CHI3L2	chitinase 3-like 2
NEK3	NIMA (never in mitosis gene a)-related kinase 3
TIAM1	T-cell lymphoma invasion and metastasis 1
PLCB1	phospholipase C, beta 1 (phosphoinositide-specific)
KRT4	keratin 4
ZNF248	zinc finger protein 248
TCF25	transcription factor 25 (basic helix-loop-helix)
PAQR3	progesterin and adipoQ receptor family member III
MUC5B	mucin 5B, oligomeric mucus/gel-forming
RUFY3	RUN and FYVE domain containing 3
NPTX2	neuronal pentraxin II
TRA2A	transformer 2 alpha homolog (<i>Drosophila</i>)
ENOSF1	enolase superfamily member 1
SLC1A1	solute carrier family 1 (neuronal/epithelial high affinity glutamate transporter, system Xag), member 1
FAM69A	family with sequence similarity 69, member A
GLB1L2	galactosidase, beta 1-like 2
KSR1	kinase suppressor of ras 1
STARD5	StAR-related lipid transfer (START) domain containing 5
CLMN	calmin (calponin-like, transmembrane)
THSD7A	thrombospondin, type I, domain containing 7A
PAX8	paired box 8
RPGRIP1L	RPGRIP1-like
ZAP70	zeta-chain (TCR) associated protein kinase 70kDa
CCL8	chemokine (C-C motif) ligand 8
GSN	gelsolin
PTPRD	protein tyrosine phosphatase, receptor type, D
MBD4	methyl-CpG binding domain protein 4
CD7	CD7 molecule
MYRIP	myosin VIIA and Rab interacting protein
GNAS	GNAS complex locus
ABCB9	ATP-binding cassette, sub-family B (MDR/TAP), member 9
GAL	galanin prepropeptide

DKK3	dickkopf 3 homolog (Xenopus laevis)
RPL17 /// RPL17-C18ORF32	ribosomal protein L17 /// RPL17-C18orf32 readthrough
MUC5AC	mucin 5AC, oligomeric mucus/gel-forming
NOV	nephroblastoma overexpressed
JUND	jun D proto-oncogene
RASGRP2	RAS guanyl releasing protein 2 (calcium and DAG-regulated)
HSPA12A	heat shock 70kDa protein 12A
CTSW	cathepsin W
CDC42BPA	CDC42 binding protein kinase alpha (DMPK-like)
KLRB1	killer cell lectin-like receptor subfamily B, member 1
ADAMTS2	ADAM metalloproteinase with thrombospondin type 1 motif, 2
CD7	CD7 molecule
LILRP2	leukocyte immunoglobulin-like receptor pseudogene 2
XCL1 /// XCL2	chemokine (C motif) ligand 1 /// chemokine (C motif) ligand 2
MNX1	motor neuron and pancreas homeobox 1
SEP10	septin 10
ADD1	adducin 1 (alpha)
HSPB6	heat shock protein, alpha-crystallin-related, B6
N4BP3	NEDD4 binding protein 3
MEGF8	multiple EGF-like-domains 8
CTTN	cortactin
SP140L	SP140 nuclear body protein-like
ATP2C2	ATPase, Ca++ transporting, type 2C, member 2
DOK5	docking protein 5
LOC100170939	glucuronidase, beta pseudogene
CXCL5	chemokine (C-X-C motif) ligand 5
TM4SF1	transmembrane 4 L six family member 1
RC3H1	ring finger and CCCH-type domains 1
SLC35E2	solute carrier family 35, member E2
KRT86 /// LOC100509764	keratin 86 /// uncharacterized LOC100509764
PRSS3P2	protease, serine, 3 pseudogene 2
HLA-DQB2	major histocompatibility complex, class II, DQ beta 2
CTAG2	cancer/testis antigen 2
DUOX1	dual oxidase 1
TARP /// TRGC2	TCR gamma alternate reading frame protein /// T cell receptor gamma constant 2
PTGDR	prostaglandin D2 receptor (DP)
GABRA2	gamma-aminobutyric acid (GABA) A receptor, alpha 2
TRDV3	T cell receptor delta variable 3

SMPD1	sphingomyelin phosphodiesterase 1, acid lysosomal
FAS	Fas (TNF receptor superfamily, member 6)
LOC100288594	uncharacterized LOC100288594
TPSAB1 /// TPSB2	tryptase alpha/beta 1 /// tryptase beta 2 (gene/pseudogene)
CCL2	chemokine (C-C motif) ligand 2
KIR3DL3	killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 3
FAM48A	family with sequence similarity 48, member A
RGS1	regulator of G-protein signaling 1
YME1L1	YME1-like 1 (<i>S. cerevisiae</i>)
C14orf1	chromosome 14 open reading frame 1
LOC100287387	Uncharacterized LOC100287387
COL7A1	collagen, type VII, alpha 1
KLK13	kallikrein-related peptidase 13
LOC283683 /// LOC646278	uncharacterized LOC283683 /// programmed cell death 6 interacting protein pseudogene
HAL	histidine ammonia-lyase
SGSM2	small G protein signaling modulator 2
TRIM44	tripartite motif containing 44
RNASET2	ribonuclease T2
CXCL14	chemokine (C-X-C motif) ligand 14
NUSAP1	nucleolar and spindle associated protein 1
CLDN1	claudin 1
MLPH	melanophilin
C1QA	complement component 1, q subcomponent, A chain
TYW1 /// TYW1B	tRNA-yW synthesizing protein 1 homolog (<i>S. cerevisiae</i>) /// tRNA-yW synthesizing protein 1 homolog B (<i>S. cerevisiae</i>)
SNX10	sorting nexin 10
GCFC1	GC-rich sequence DNA-binding factor 1
LIMD2	LIM domain containing 2
UPF3B	UPF3 regulator of nonsense transcripts homolog B (yeast)
ACP6	acid phosphatase 6, lysophosphatidic
COL5A3	collagen, type V, alpha 3
SPRR3	small proline-rich protein 3
ASPN	asporin
DACT1	dapper, antagonist of beta-catenin, homolog 1 (<i>Xenopus laevis</i>)
HSPA14	heat shock 70kDa protein 14
ZNF331	zinc finger protein 331
ECHDC3	enoyl CoA hydratase domain containing 3

IFT81	intraflagellar transport 81 homolog (Chlamydomonas)
NKAIN1	Na ⁺ /K ⁺ transporting ATPase interacting 1
RAB3IL1	RAB3A interacting protein (rabin3)-like 1
ZNF767	zinc finger family member 767
ZNF606	zinc finger protein 606
ATP8A2	ATPase, aminophospholipid transporter, class I, type 8A, member 2
RASAL1	RAS protein activator like 1 (GAP1 like)
ERAP2	endoplasmic reticulum aminopeptidase 2
DENND1A	DENN/MADD domain containing 1A
FZD10	frizzled family receptor 10
PVRIG	poliovirus receptor related immunoglobulin domain containing
FKRP	fukutin related protein
C1orf116	chromosome 1 open reading frame 116
CHODL	chondrolectin
FRAT1	frequently rearranged in advanced T-cell lymphomas
MAGIX	MAGI family member, X-linked
APBB1IP	amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein
ZNF750	zinc finger protein 750
EPHX3	epoxide hydrolase 3
STAP1	signal transducing adaptor family member 1
CSPP1	centrosome and spindle pole associated protein 1
FXD7	FXD domain containing ion transport regulator 7
ALDH8A1	aldehyde dehydrogenase 8 family, member A1
FAM86C1	family with sequence similarity 86, member C1
GPR97	G protein-coupled receptor 97
UBASH3A	ubiquitin associated and SH3 domain containing A
CHD9	chromodomain helicase DNA binding protein 9
UIMC1	ubiquitin interaction motif containing 1
WDR19	WD repeat domain 19
ST6GALNAC5	ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 5
CHST8	carbohydrate (N-acetylgalactosamine 4-O) sulfotransferase 8
DENND1C	DENN/MADD domain containing 1C
OTOR	otoraplin
BACH2	BTB and CNC homology 1, basic leucine zipper transcription factor 2
YIPF5	Yip1 domain family, member 5

TBL1XR1	transducin (beta)-like 1 X-linked receptor 1
B4GALT5	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5
HLA-DRB1 /// HLA-DRB3 /// HLA-DRB4 /// HLA-DRB5 /// LOC100507709 /// LOC100507714 /// LOC100509582	major histocompatibility complex, class II, DR beta 1 /// major histocompatibility complex, class II, DR beta 3 /// major histocompatibility complex, class II, DR beta 4 /// major histocompatibility complex, class II, DR beta 5 /// HLA class II histocompatibility antigen, DRB1-7 beta chain-like /// HLA class II histocompatibility antigen, DRB1-7 beta chain-like /// HLA class II histocompatibility antigen, DR beta 4 chain-like
PARD3	par-3 partitioning defective 3 homolog (C. elegans)
BHLHE41	basic helix-loop-helix family, member e41
GDF15	growth differentiation factor 15
ZNF83	zinc finger protein 83
AGMAT	agmatine ureohydrolase (agmatinase)
NLRP2	NLR family, pyrin domain containing 2
PIK3IP1	phosphoinositide-3-kinase interacting protein 1
UGCG	UDP-glucose ceramide glucosyltransferase
ANGEL2	angel homolog 2 (Drosophila)
HNRNPA1	heterogeneous nuclear ribonucleoprotein A1
FLJ42627	uncharacterized LOC645644
SLCO4C1	solute carrier organic anion transporter family, member 4C1
FAM63B	family with sequence similarity 63, member B
DESI2	desumoylating isopeptidase 2
EGOT	eosinophil granule ontogeny transcript (non-protein coding)
C4orf34	chromosome 4 open reading frame 34
TUBBP5	tubulin, beta pseudogene 5
PDCD6	Programmed cell death 6
APPL1	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 1
CPPED1	calcineurin-like phosphoesterase domain containing 1
ZAK	sterile alpha motif and leucine zipper containing kinase AZK
MANEA	mannosidase, endo-alpha
ANKH	ankylosis, progressive homolog (mouse)
TRIM8	tripartite motif containing 8
CGN	cingulin
GJB2	gap junction protein, beta 2, 26kDa
MS4A7	membrane-spanning 4-domains, subfamily A, member 7
C21orf56	chromosome 21 open reading frame 56

GBP3	guanylate binding protein 3
CRISPLD1	cysteine-rich secretory protein LCCL domain containing 1
C15orf48	chromosome 15 open reading frame 48
MGEA5	meningioma expressed antigen 5 (hyaluronidase)
SEMA6B	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6B
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
ZMYND12	zinc finger, MYND-type containing 12
SLC4A11	solute carrier family 4, sodium borate transporter, member 11
DIO3OS	DIO3 opposite strand/antisense RNA (non-protein coding)
TEX101	testis expressed 101
CISH	cytokine inducible SH2-containing protein
CRLS1	cardiolipin synthase 1
PXMP4	peroxisomal membrane protein 4, 24kDa
PCDHA1 /// PCDHA10 /// PCDHA11 /// PCDHA12 /// PCDHA13 /// PCDHA2 /// PCDHA3 /// PCDHA4 /// PCDHA5 /// PCDHA6 /// PCDHA7 /// PCDHA8 /// PCDHA9 /// PCDHAC1 /// PCDHAC2	protocadherin alpha 1 /// protocadherin alpha 10 /// protocadherin alpha 11 /// protocadherin alpha 12 /// protocadherin alpha 13 /// protocadherin alpha 2 /// protocadherin alpha 3 /// protocadherin alpha 4 /// protocadherin alpha 5 /// protocadherin alpha 6 /// protocadherin alpha 7 /// protocadherin alpha 8 /// protocadherin alpha 9 /// protocadherin alpha subfamily C, 1 /// protocadherin alpha subfamily C, 2
MS4A8B	membrane-spanning 4-domains, subfamily A, member 8B
BEX2	brain expressed X-linked 2
TRPM6	transient receptor potential cation channel, subfamily M, member 6
ARHGAP9	Rho GTPase activating protein 9
SMEK2	SMEK homolog 2, suppressor of mek1 (Dictyostelium)
KREMEN1	kringle containing transmembrane protein 1
TNFRSF18	tumor necrosis factor receptor superfamily, member 18
WASF2	WAS protein family, member 2
SNHG1 /// SNORD22 /// SNORD25 /// SNORD26 /// SNORD27 /// SNORD28 /// SNORD29 /// SNORD31	small nucleolar RNA host gene 1 (non-protein coding) /// small nucleolar RNA, C/D box 22 /// small nucleolar RNA, C/D box 25 /// small nucleolar RNA, C/D box 26 /// small nucleolar RNA, C/D box 27 /// small nucleolar RNA, C/D box 28 /// small nucleolar RNA, C/D box 29 /// small nucleolar RNA, C/D box 31
GPATCH4	G patch domain containing 4
H19 /// MIR675	H19, imprinted maternally expressed transcript (non-protein coding) /// microRNA 675
LOC100506548 /// RPL37	uncharacterized LOC100506548 /// ribosomal protein L37

GPCPD1	glycerophosphocholine phosphodiesterase GDE1 homolog (S. cerevisiae)
SLAIN2	SLAIN motif family, member 2
PDPR	pyruvate dehydrogenase phosphatase regulatory subunit
ASPH	aspartate beta-hydroxylase
SPIRE1	spire homolog 1 (Drosophila)
ST3GAL1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1
RABEP1	rabaptin, RAB GTPase binding effector protein 1
OGFOD1	2-oxoglutarate and iron-dependent oxygenase domain containing 1
TMEM18	transmembrane protein 18
SLC1A2	solute carrier family 1 (glial high affinity glutamate transporter), member 2
ZNF295	zinc finger protein 295
MRPL50	mitochondrial ribosomal protein L50
SLC45A4	solute carrier family 45, member 4
PAG1	phosphoprotein associated with glycosphingolipid microdomains 1
COL12A1	collagen, type XII, alpha 1
CEP95	centrosomal protein 95kDa
HNRNPU-AS1	HNRNPU antisense RNA 1 (non-protein coding)
CGNL1	cingulin-like 1
EIF2C2	eukaryotic translation initiation factor 2C, 2
PHLDA1	pleckstrin homology-like domain, family A, member 1
DDHD1	DDHD domain containing 1
BPIFB1	BPI fold containing family B, member 1
SYT13	synaptotagmin XIII
ELL2	elongation factor, RNA polymerase II, 2
ZFP90	zinc finger protein 90 homolog (mouse)
LOC100288152	uncharacterized LOC100288152
COL8A1	collagen, type VIII, alpha 1
CLCN5	chloride channel, voltage-sensitive 5
DNER	delta/notch-like EGF repeat containing
SPTBN1	spectrin, beta, non-erythrocytic 1
ZMAT1	zinc finger, matrin-type 1
AMMECR1	Alport syndrome, mental retardation, midface hypoplasia and elliptocytosis chromosomal region gene 1
RMI2	RMI2, RecQ mediated genome instability 2, homolog (S. cerevisiae)
TM7SF3	transmembrane 7 superfamily member 3
NHSL1	NHS-like 1

HINT3	histidine triad nucleotide binding protein 3
CD109	CD109 molecule
GTPBP5	GTP binding protein 5 (putative)
ZNF251	zinc finger protein 251
C8orf42	chromosome 8 open reading frame 42
ADAMTS9	ADAM metalloproteinase with thrombospondin type 1 motif, 9
FST	follistatin
UNC5B	unc-5 homolog B (C. elegans)
LRIG3	leucine-rich repeats and immunoglobulin-like domains 3
SOX8	SRY (sex determining region Y)-box 8
DEPDC1B	DEP domain containing 1B
NOTCH2NL	notch 2 N-terminal like
GLT8D2	glycosyltransferase 8 domain containing 2
INHBA	inhibin, beta A
ELOVL7	ELOVL fatty acid elongase 7
SUSD3	sushi domain containing 3
KIAA1211	KIAA1211
POC5	POC5 centriolar protein homolog (Chlamydomonas)
CCT6P1 /// CCT6P3	chaperonin containing TCP1, subunit 6 (zeta) pseudogene 1 /// chaperonin containing TCP1, subunit 6 (zeta) pseudogene 3
VGLL3	vestigial like 3 (Drosophila)
FOXQ1	forkhead box Q1
MGC16121 /// MIR503	uncharacterized protein MGC16121 /// microRNA 503
GFRA1	GDNF family receptor alpha 1
TSPAN11	tetraspanin 11
FBXL16	F-box and leucine-rich repeat protein 16
TMEM63C	transmembrane protein 63C
RBMXL1	RNA binding motif protein, X-linked-like 1
PDCD5	programmed cell death 5
C16orf74	chromosome 16 open reading frame 74
FMNL3	formin-like 3
LOC154761	family with sequence similarity 115, member C pseudogene
LOC100506234 /// TMEM185A	uncharacterized LOC100506234 /// transmembrane protein 185A
FGD4	FYVE, RhoGEF and PH domain containing 4
ZG16B	zymogen granule protein 16 homolog B (rat)
LRCH3	leucine-rich repeats and calponin homology (CH) domain containing 3
CTXN1	cortexin 1

CP	ceruloplasmin (ferroxidase)
SORCS1	sortilin-related VPS10 domain containing receptor 1
ZNF252P	zinc finger protein 252, pseudogene
GAS5 /// SNORD44 /// SNORD47 /// SNORD76 /// SNORD77 /// SNORD79 /// SNORD80 /// SNORD81	growth arrest-specific 5 (non-protein coding) /// small nucleolar RNA, C/D box 44 /// small nucleolar RNA, C/D box 47 /// small nucleolar RNA, C/D box 76 /// small nucleolar RNA, C/D box 77 /// small nucleolar RNA, C/D box 79 /// small nucleolar RNA, C/D box 80 /// small nucleolar RNA, C/D box 81
AGR3	anterior gradient 3 homolog (Xenopus laevis)
LOC283788	FSHD region gene 1 pseudogene
CLDN11	claudin 11
NANOS1	nanos homolog 1 (Drosophila)
C1orf162	chromosome 1 open reading frame 162
DPP6	dipeptidyl-peptidase 6
ODF2L	outer dense fiber of sperm tails 2-like
SNHG9 /// SNORA78	small nucleolar RNA host gene 9 (non-protein coding) /// small nucleolar RNA, H/ACA box 78
SOX7	SRY (sex determining region Y)-box 7
FLJ43663	uncharacterized LOC378805
RAB27B	RAB27B, member RAS oncogene family
CD36	CD36 molecule (thrombospondin receptor)
PTGR1	prostaglandin reductase 1
ATF7	activating transcription factor 7
DERL3	derlin 3
CES4A	carboxylesterase 4A
DACH1	dachshund homolog 1 (Drosophila)
C9orf24	chromosome 9 open reading frame 24
SARNP	SAP domain containing ribonucleoprotein
C17orf100	chromosome 17 open reading frame 100
PRTG	protogenin
PROK1	prokineticin 1
PRTG	protogenin
ATG9B	autophagy related 9B
LOC728613	programmed cell death 6 pseudogene
ANKRD28	ankyrin repeat domain 28
ATG16L2	autophagy related 16-like 2 (S. cerevisiae)
RBM26	RNA binding motif protein 26
IFIT3	interferon-induced protein with tetratricopeptide repeats 3
FAM46B	family with sequence similarity 46, member B
C14orf118	chromosome 14 open reading frame 118

ZNF502	zinc finger protein 502
C20orf85	chromosome 20 open reading frame 85
DISP2	dispatched homolog 2 (Drosophila)
FAM132B	family with sequence similarity 132, member B
LOC728431	uncharacterized LOC728431
SMTNL2	smoothelin-like 2
ZNF207	zinc finger protein 207
SNAP23	synaptosomal-associated protein, 23kDa
FAM166B	family with sequence similarity 166, member B
PI15	peptidase inhibitor 15
EWSR1	Ewing sarcoma breakpoint region 1
RNF213	ring finger protein 213
CDCA7	cell division cycle associated 7
PITPNM3	PITPNM family member 3
LOC220729 /// SDHA /// SDHAP1 /// SDHAP2	succinate dehydrogenase complex, subunit A, flavoprotein (Fp) pseudogene /// succinate dehydrogenase complex, subunit A, flavoprotein (Fp) /// succinate dehydrogenase complex, subunit A, flavoprotein pseudogene 1 /// succinate dehydrogenase complex, subunit A, flavoprotein pseudogene 2
USP53	ubiquitin specific peptidase 53
F2RL2	coagulation factor II (thrombin) receptor-like 2
DDX17	DEAD (Asp-Glu-Ala-Asp) box helicase 17
LOC100507100	uncharacterized LOC100507100
C2orf82	chromosome 2 open reading frame 82
LPAR5	lysophosphatidic acid receptor 5
BAG5	BCL2-associated athanogene 5
LOC100507008	uncharacterized LOC100507008
PKHD1L1	polycystic kidney and hepatic disease 1 (autosomal recessive)-like 1
MIR210HG	MIR210 host gene (non-protein coding)
FAM210A	family with sequence similarity 210, member A
LOC100505875	uncharacterized LOC100505875
ACRBP	acrosin binding protein
SPG7	spastic paraplegia 7 (pure and complicated autosomal recessive)
PALM3	paralemmin 3
C1orf194	chromosome 1 open reading frame 194
C1orf192	chromosome 1 open reading frame 192
MIR30C2	microRNA 30c-2
IP6K3	inositol hexakisphosphate kinase 3

WIPF1	WAS/WASL interacting protein family, member 1
FDPSL2A	MGC44478
GBP1	guanylate binding protein 1, interferon-inducible
GJB6	gap junction protein, beta 6, 30kDa
EOMES	eomesodermin
NOG	noggin
FLJ14186 /// LOC441124 /// LOC729021 /// LOC729218	uncharacterized LOC401149 /// uncharacterized LOC441124 /// uncharacterized LOC729021 /// uncharacterized LOC729218
KRT80	keratin 80
NCKAP5L	NCK-associated protein 5-like
C16orf53	chromosome 16 open reading frame 53
DCAF17	DDB1 and CUL4 associated factor 17
IKZF2	IKAROS family zinc finger 2 (Helios)
FILIP1	filamin A interacting protein 1
BICD1	bicaudal D homolog 1 (Drosophila)
ZNF678	zinc finger protein 678
EPPK1	epiplakin 1
NKD2	naked cuticle homolog 2 (Drosophila)
ULK4	unc-51-like kinase 4 (C. elegans)
SLA2	Src-like-adaptor 2
ZNF880	zinc finger protein 880
ZNF274	zinc finger protein 274
COL3A1	Collagen, type III, alpha 1
TRMT13	tRNA methyltransferase 13 homolog (S. cerevisiae)
RALGAPA2	Ral GTPase activating protein, alpha subunit 2 (catalytic)
MEGF10	multiple EGF-like-domains 10
SP3	Sp3 transcription factor
PROK2	prokineticin 2
LOXL1-AS1	LOXL1 antisense RNA 1 (non-protein coding)
ANXA1	Annexin A1
NTNG2	netrin G2
CCDC114	coiled-coil domain containing 114
KIAA1609	KIAA1609
RAB12	RAB12, member RAS oncogene family
KCNK3	potassium channel, subfamily K, member 3
GNGT2	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2
GIMAP8	GTPase, IMAP family member 8
C14orf28	chromosome 14 open reading frame 28
LOC100507316	uncharacterized LOC100507316

LRPAP1	low density lipoprotein receptor-related protein associated protein 1
DLGAP1	discs, large (Drosophila) homolog-associated protein 1
GPAT2	glycerol-3-phosphate acyltransferase 2, mitochondrial
MASP1	mannan-binding lectin serine peptidase 1 (C4/C2 activating component of Ra-reactive factor)
LOC100422737	uncharacterized LOC100422737
MRT04	mRNA turnover 4 homolog (S. cerevisiae)
SCARA5	scavenger receptor class A, member 5 (putative)
YPEL4	yippee-like 4 (Drosophila)
CDK9	cyclin-dependent kinase 9
KIAA1609	KIAA1609
CAPSL	calcyphosine-like
VPS13B	vacuolar protein sorting 13 homolog B (yeast)
RDH5	retinol dehydrogenase 5 (11-cis/9-cis)
FAM3C	family with sequence similarity 3, member C
PTPN5	protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)
TMEM132B	transmembrane protein 132B
GPR110	G protein-coupled receptor 110
BCL2L10	BCL2-like 10 (apoptosis facilitator)
ZNF667	zinc finger protein 667
GSG1L	GSG1-like
CCDC78	coiled-coil domain containing 78
LHFPL3	lipoma HMGIC fusion partner-like 3
HOXB-AS3	HOXB cluster antisense RNA 3 (non-protein coding)
HGD	homogentisate 1,2-dioxygenase
SLC6A13	solute carrier family 6 (neurotransmitter transporter, GABA), member 13
PRKRA	protein kinase, interferon-inducible double stranded RNA dependent activator
PCNP	PEST proteolytic signal containing nuclear protein
SOX5	SRY (sex determining region Y)-box 5
PLEKHA2	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2
ARID1B	AT rich interactive domain 1B (SWI1-like)
HAP1	huntingtin-associated protein 1
TMEM136	transmembrane protein 136
C11orf80	chromosome 11 open reading frame 80
C1orf168	chromosome 1 open reading frame 168
MTHFD2L	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2-like

LOC494150	prohibitin pseudogene
AVPR1A	arginine vasopressin receptor 1A
NSUN7	NOP2/Sun domain family, member 7
DOCK8	dedicator of cytokinesis 8
MTHFR	methylenetetrahydrofolate reductase (NAD(P)H)
ZNF786	zinc finger protein 786
LOC100505912	uncharacterized LOC100505912
FBXL20	F-box and leucine-rich repeat protein 20
PLCXD3	phosphatidylinositol-specific phospholipase C, X domain containing 3
CEP152	centrosomal protein 152kDa
RBP1	retinol binding protein 1, cellular
HOXA11-AS	HOXA11 antisense RNA (non-protein coding)
ACOXL	acyl-CoA oxidase-like
ZFYVE16	zinc finger, FYVE domain containing 16
HR	hairless homolog (mouse)
CCDC15	coiled-coil domain containing 15
NUPL1	nucleoporin like 1
SCNN1G	sodium channel, non-voltage-gated 1, gamma subunit
C6orf132	chromosome 6 open reading frame 132
CPM	carboxypeptidase M
NFKBID	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, delta
XDH	xanthine dehydrogenase
ANKRD33	ankyrin repeat domain 33
C1QTNF6	C1q and tumor necrosis factor related protein 6
LOC100505648	uncharacterized LOC100505648
ZNF420	zinc finger protein 420
LOC642236	FSHD region gene 1 pseudogene
MAP6D1	MAP6 domain containing 1
LOC100506303 /// LOC100653149 /// LOC400879	uncharacterized LOC100506303 /// uncharacterized LOC100653149 /// uncharacterized LOC400879
PIP5KL1	phosphatidylinositol-4-phosphate 5-kinase-like 1
DCAF8	DDB1 and CUL4 associated factor 8
CASZ1	castor zinc finger 1
KANSL1	KAT8 regulatory NSL complex subunit 1
WDR38	WD repeat domain 38
ZNF793	zinc finger protein 793
ZNF300P1	zinc finger protein 300 pseudogene 1
LOC100505679	uncharacterized LOC100505679
CYCS	cytochrome c, somatic

MTHFSD	methenyltetrahydrofolate synthetase domain containing
PHACTR2	phosphatase and actin regulator 2
SGPP2	sphingosine-1-phosphate phosphatase 2
CRP	C-reactive protein, pentraxin-related
AQP3	aquaporin 3 (Gill blood group)
EPOR	erythropoietin receptor
CELSR1	cadherin, EGF LAG seven-pass G-type receptor 1 (flamingo homolog, Drosophila)
LZTS1	leucine zipper, putative tumor suppressor 1
RAB15	RAB15, member RAS oncogene family
ZNF814	zinc finger protein 814
ZNF718	Zinc finger protein 718
DUSP5P	dual specificity phosphatase 5 pseudogene
MFSD2A	major facilitator superfamily domain containing 2A
HINT1	histidine triad nucleotide binding protein 1
VASH1	Vasohibin 1
LOC440993	uncharacterized LOC440993
SLC38A10	solute carrier family 38, member 10
RPS16P5	ribosomal protein S16 pseudogene 5
SNORD8	small nucleolar RNA, C/D box 8
DEFB124	defensin, beta 124
LOC100505812	uncharacterized LOC100505812
TRIM13	tripartite motif containing 13
GPBP1L1	GC-rich promoter binding protein 1-like 1
TECR	trans-2,3-enoyl-CoA reductase
MLX	MAX-like protein X
MPZL3	myelin protein zero-like 3
LSM4	LSM4 homolog, U6 small nuclear RNA associated (<i>S. cerevisiae</i>)
PCBP2	poly(rC) binding protein 2
MYL6	myosin, light chain 6, alkali, smooth muscle and non-muscle
NENF	Neudesin neurotrophic factor
SH3BP2	SH3-domain binding protein 2
LOC100653010	uncharacterized LOC100653010
ERV3-2	endogenous retrovirus group 3, member 2
PRO2852	uncharacterized protein PRO2852
LMCD1	LIM and cysteine-rich domains 1
NUDT4	Nudix (nucleoside diphosphate linked moiety X)-type motif 4
CRIM1	Cysteine rich transmembrane BMP regulator 1 (chordin-like)

SRGAP2P1	SLIT-ROBO Rho GTPase activating protein 2 pseudogene 1
DCBLD2	Discoidin, CUB and LCCL domain containing 2
ORAI2	ORAI calcium release-activated calcium modulator 2
LOC100653336 /// PGM5-AS1	uncharacterized LOC100653336 /// PGM5 antisense RNA 1 (non-protein coding)
RAPH1	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1
CDAN1	Congenital dyserythropoietic anemia, type I
LOC100506941	uncharacterized LOC100506941
LOC100506165	uncharacterized LOC100506165
B2M	Beta-2-microglobulin
KRR1	KRR1, small subunit (SSU) processome component, homolog (yeast)
BCAR1	breast cancer anti-estrogen resistance 1
EBF1	Early B-cell factor 1
UBE2I	ubiquitin-conjugating enzyme E2I
CDC14B	CDC14 cell division cycle 14 homolog B (<i>S. cerevisiae</i>)
SNORD3B-1 /// SNORD3B-2 /// SNORD3D	small nucleolar RNA, C/D box 3B-1 /// small nucleolar RNA, C/D box 3B-2 /// small nucleolar RNA, C/D box 3D
NSD1	nuclear receptor binding SET domain protein 1
DCAF7	DDB1 and CUL4 associated factor 7
SUZ12P	Suppressor of zeste 12 homolog pseudogene
IFNAR1	Interferon (alpha, beta and omega) receptor 1
NUP62	Nucleoporin 62kDa
LOC100134445	uncharacterized LOC100134445
WWC1	WW and C2 domain containing 1
IRS1	insulin receptor substrate 1
LOC100653149	uncharacterized LOC100653149
RNF144B	Ring finger protein 144B
DAPK1-IT1	DAPK1 intronic transcript 1 (non-protein coding)
SLC2A8	Solute carrier family 2 (facilitated glucose transporter), member 8
LOC441179	uncharacterized LOC441179
ZFAND6	Zinc finger, AN1-type domain 6
LOC100507153	uncharacterized LOC100507153
PSMG4	Proteasome (prosome, macropain) assembly chaperone 4
NAMPT	Nicotinamide phosphoribosyltransferase
ZNF652	Zinc finger protein 652
RAB18	RAB18, member RAS oncogene family
MUC20	mucin 20, cell surface associated

E = endometriosis

Supplemental Table 11A: PCR Validation of Proliferative Phase Differential Gene Expression of Samples Corresponding to the First and Second Decision Points

Gene symbol	Branch 1 Other (i.e., E+NE.UPP] vs. NE.NUPP		Gene symbol	Branch 2 E vs NE.UPP	
	Array	PCR		Array	PCR
FOSB	48.62	27.92	MUC5B	5.26	2.60
FOS	33.50	13.22	LTF	4.05	5.92
MALAT1	-4.65	2.23	SCGB3A1	2.93	2.69
DDX17	-5.83	-1.34	SLC7A4	2.47	1.49
SNTN	-7.79	1.30	PCDH8	2.08	-1.15
DIO2	-15.60	-1.55	HLA-DQA1	1.54	-1.10
			RBM6	1.17	2.63
			SLC8A1	1.12	1.28
			NASP	-1.87	-1.21
			IQGAP1	-2.27	-1.13
			CDKN2A	-2.53	-1.22
			ACTA2	-3.00	-2.46

Supplemental Table 11B. PCR Validation of Differentially Expressed Genes in the Branch 3 Comparison in Proliferative Endometrium: Moderate/Severe vs. Minimal/Mild Endometriosis

Gene symbol	Array	PCR	Gene symbol	Array	PCR	Gene symbol	Array	PCR
CALD1	5.39	1.60	SDCCAG8	1.78	1.19	CEACAM21	-2.17	-1.01
RXFP1	5.36	2.57	FAM81B	1.78	1.63	LTF	-2.18	-2.44
FBN1	4.90	1.22	SYBU	1.73	1.77	ECEL1	-2.20	-1.49
GABRP	4.53	2.24	ZBBX	1.66	1.30	MUC5B	-2.27	-1.14
PRKX	4.24	3.83	VIM	1.64	-1.63	GSTM2	-2.28	-1.18
PTPN11	3.54	1.63	ILDR1	1.58	1.57	GSTM4	-2.40	1.25
ERAP2	3.41	2.99	MS4A8B	1.49	1.49	CDKN2A	-2.55	1.21
VNN1	3.20	2.87	PDK4	1.40	1.17	NAA25	-2.55	1.17
PKHD1L1	3.05	2.59	FBXO15	1.23	1.20	REN	-2.73	-6.93
FAM48A	3.01	1.48	SF1	1.16	1.76	NUPL1	-2.76	-1.01
FAM110C	2.99	2.88	TULP4	1.15	1.16	FGF18	-2.78	1.22
MALAT1	2.98	3.61	UNC5A	1.15	5.24	FOSL1	-2.79	-1.79
ENPP3	2.63	2.91	CRYBB2	1.05	1.55	GZMH	-2.80	1.41
CDC42SE2	2.36	1.18	PEG10	1.01	1.12	GSTM1	-3.03	1.53
SLC7A1	2.23	2.56	SCGB1D2	-1.39	8.26	EPHA2	-3.31	-1.21
LPHN2	2.19	1.53	MAPRE3	-1.48	1.31	GOLT1A	-3.40	-1.63
ANLN	2.15	1.23	PDZK1	-1.54	-2.72	BMP7	-4.37	1.03
SECISBP2	2.13	1.07	NMT2	-1.57	-1.25	EMID2	-5.45	-1.65
PLCL1	2.05	4.43	SFRP5	-1.80	-1.46	MYCN	-6.45	-2.29
HSD17B2	1.98	8.01	CDH3	-1.81	-2.50	D4S234E	-6.48	-1.50
SNRPA1	1.96	1.58	NKAIN4	-1.90	2.56			
CEACAM1	1.91	1.72	SP3	-1.90	-1.20			
SLC12A2	1.85	1.82	GSTT1	-1.95	-1.33			
KLHL24	1.82	1.54	GIN54	-2.04	-1.60			
IQCG	1.82	1.22	BEX1	-2.15	-1.27			

Supplemental Table 11C. PCR Validation of DE Gene Expression in Proliferative Endometrium: Endometriosis vs. Normal

Gene symbol	Array	PCR	Gene symbol	Array	PCR	Gene symbol	Array	PCR
FOSB	34.11	16.83	FBXO15	-1.73	1.21	IQGAP1	-3.54	-1.16
FOS	25.78	13.39	MS4A8B	-1.87	2.09	MALAT1	-3.62	2.68
MUC5B	8.19	5.61	PEG10	-1.88	1.48	FAM110C	-3.68	1.38
SCGB3A1	6.80	4.43	PRKRA	-2.11	-1.48	KLHL24	-3.71	-1.41
LTF	4.77	5.97	FOXP1	-2.23	1.11	IQCG	-3.75	-1.33
SLC7A4	3.58	3.06	SLC8A1	-2.28	1.32	QKI	-3.88	1.00
CDKN2A	3.39	1.74	ZBBX	-2.31	1.57	LPHN2	-4.16	-2.28
GSTM2	2.81	1.47	PKHD1L1	-2.42	1.24	TULP4	-4.25	1.01
GSTM1	2.71	1.87	FBN1	-2.44	-1.74	FAM48A	-4.60	-1.16
EPHA2	2.56	1.83	CDC42SE2	-2.52	-1.31	HELLS	-5.48	1.02
BMP7	2.55	2.81	WHSC1L1	-2.54	-1.27	PTPN11	-5.76	-1.34
FOSL1	2.49	2.99	TMEM106B	-2.55	-1.29	ANLN	-5.81	-1.69
FGF18	2.41	1.12	SNRPA1	-2.57	1.19	DDX17	-5.88	-1.31
EMID2	2.41	1.35	PRKX	-2.63	1.51	SNTN	-7.44	1.43
GOLT1A	2.12	2.72	SLC12A2	-2.63	-1.38	NASP	-8.24	-2.23
NKAIN4	2.06	1.44	ERAP2	-2.64	-1.33	DIO2	-19.34	-1.69
UNC5A	2.02	4.05	NUPL1	-2.65	-1.52			
GZMH	2.00	2.11	VIM	-2.72	-1.65			
SFRP5	1.99	4.88	GNG12	-2.90	-1.48			
GSTM4	1.93	1.93	FAM81B	-2.93	1.41			
MAPRE3	1.88	1.90	NMT2	-3.25	-1.48			
WDR1	1.78	1.34	RXFP1	-3.40	1.28			
ECEL1	1.67	7.32	PDZK1	-3.48	-1.24			
GIN54	-1.55	-1.28	SECISBP2	-3.49	-1.61			
RBM6	-1.62	1.52	GABRP	-3.49	-1.33			

Supplemental Table 11D. PCR Validation of DE Gene Expression in PE No Endometriosis but Uterine/Pelvic Pathologies vs. Normal

Gene symbol	Array	PCR	Gene symbol	Array	PCR	Gene symbol	Array	PCR
FOSB	96.47	42.20	ECEL1	1.58	3.54	HELLS	-3.46	-1.03
FOS	55.59	12.91	FBXO15	-1.67	-1.55	WHSC1L1	-3.68	-1.12
EPHA2	5.69	2.51	SDCCAG8	-1.75	-1.17	RXFP1	-3.86	1.11
CDKN2A	5.61	2.12	PRKRA	-1.80	-1.20	SECISBP2	-4.08	1.02
FOSL1	4.82	5.92	PLCL1	-1.83	-1.19	QKI	-4.23	1.23
FGF18	4.50	2.11	PEG10	-2.02	1.11	NASP	-4.27	-1.57
HLA-DQA1	4.37	1.43	SLC8A1	-2.03	1.03	FAM110C	-4.64	-1.27
GSTM1	3.97	2.25	TMEM106B	-2.26	-1.09	FAM48A	-4.65	-1.32
CDH3	3.94	2.22	SNRPA1	-2.27	-1.03	ANLN	-5.09	-1.52
GSTM2	3.63	1.48	SLC12A2	-2.47	-1.01	TULP4	-5.15	-1.12
ACTA2	2.66	3.74	FAM81B	-2.58	-1.22	PTPN11	-5.66	-1.28
NKAIN4	2.56	1.21	KLHL24	-2.59	-1.17	DDX17	-5.75	-1.18
GSTM4	2.38	1.58	NUPL1	-2.62	-1.60	MALAT1	-7.54	1.40
MYCN	2.30	2.23	IQGAP1	-2.62	-1.03	FBN1	-8.06	-1.31
EMID2	2.28	1.73	ERAP2	-2.65	-1.41	SNTN	-8.53	1.09
CEACAM21	2.09	1.95	CDC42SE2	-2.74	-1.16	DIO2	-10.29	-1.35
REN	2.02	1.83	NMT2	-2.84	1.54			
WDR1	1.92	1.49	ZBBX	-2.96	1.11			
SFRP5	1.91	2.04	LPHN2	-3.07	-1.57			
MAPRE3	1.90	2.11	GNG12	-3.17	-1.42			
UNC5A	1.87	2.96	PDZK1	-3.27	-2.33			
GZMH	1.87	-1.02	PRKX	-3.33	-1.11			
GOLT1A	1.81	1.99	RBM6	-3.34	-1.73			
GINS4	1.70	-1.55	GABRP	-3.41	-1.40			
SF1	1.66	2.10	IQCG	-3.41	-1.69			