Supplemental Table 2A. Genes down-regulated in PCOS compared to MSEn, all had a corrected $P<0.001$

Gene name	UniGene ID	Fold change PCOScc vs MSEn	Fold change PCOSp vs MSEn
S100 calcium binding protein P	Hs.2962	28.71	23.27
claudin 4	Hs.718794	6.93	2.57
prostaglandin E receptor 3 (subtype EP3)	Hs.445000	6.87	6.82
outer dense fiber of sperm tails 3B	Hs.531314	5.04	4.48
junctional sarcoplasmic reticulum protein 1	Hs.712901	4.72	4.20
hypothetical protein LOC100131564	Hs.714927	4.60	3.70
Ribosomal protein L37a	Hs.433701	4.30	4.10
B1 for mucin	Hs.701992	4.25	4.03
runt-related transcription factor 3	Hs.170019	4.15	3.74
Transferrin receptor (p90, CD71)	Hs.529618	4.12	3.64
hypothetical locus LOC401237	Hs.399719	4.11	4.03
glycoprotein Ib (platelet), beta polypeptide		4.11	3.81
patatin-like phospholipase domain containing 2	Hs.654697	4.08	3.15
ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast)	Hs.643548	4.02	3.27
protein tyrosine phosphatase-like (proline instead of catalytic arginine), member A	Hs.114062	4.00	3.31
hypothetical LOC388692		4.00	3.91
hypothetical LOC728649 /// hypothetical LOC728701		3.97	3.70
G protein-coupled receptor 144	Hs.454099	3.94	3.66
surfactant protein C	Hs.1074	3.91	3.13
transmembrane protein 151B	Hs.632851	3.90	3.82
double homeobox, 4 /// double homeobox, 4-like /// double homeobox, 4-like /// double homeobox, 4-like /// double homeobox, 4-like	Hs.714687	3.84	3.40
chromosome 14 open reading frame 45	Hs.644621	3.78	2.94
transcription factor 15 (basic helix-loop-helix)	Hs.437	3.72	3.39
adenosine deaminase, RNA-specific, B1 (RED1 homolog rat)	Hs.474018	3.71	3.36
Phosphodiesterase 3B, cGMP-inhibited	Hs.445711	3.64	3.36
chromosome 19 open reading frame 68	Hs.664054	3.63	3.55
Rho GTPase activating protein 23	Hs.374446	3.62	3.05
transmembrane protein 151B	Hs.632851	3.62	3.53
TEA domain family member 2	Hs.515534	3.61	3.56
hypothetical LOC645895 /// v-myb myeloblastosis viral oncogene homolog (avian)-like 1	Hs.445898	3.61	3.21
sodium channel, nonvoltage-gated 1 alpha	Hs.591047	3.61	3.12
discoidin, CUB and LCCL domain containing 2	Hs.203691	3.59	3.24
zinc finger protein 205	Hs.592088	3.58	3.11
neuregulin 1	Hs.453951	3.57	3.19
protein kinase D2	Hs.466987	3.56	3.80
SAP30-like	Hs.592566	3.54	2.82

GNAS complex locus	Hs.125898	3.53	3.16
outer dense fiber of sperm tails 3B	Hs.531314	3.50	2.98
Hypothetical protein LOC100129701	Hs.709936	3.48	3.28
myeloid/lymphoid or mixed-lineage leukemia 4	Hs.92236	3.44	2.97
discs, large homolog 4 (Drosophila)	Hs.463928	3.40	2.86
glioma tumor suppressor candidate region gene 2	Hs.421907	3.39	3.09
interleukin 34	Hs.461214	3.37	3.05
transportin 2	Hs.416049	3.36	2.56
hypothetical protein LOC157860	Hs.170296	3.33	2.73
DEAD (Asp-Glu-Ala-Asp) box polypeptide 54	Hs.506861	3.32	2.78
chromosome 9 open reading frame 44	Hs.149940	3.31	3.25
T-box 1	Hs.173984	3.30	2.79
Lamin A/C	Hs.594444	3.26	2.67
nicotinamide nucleotide adenylyltransferase 3	Hs.208673	3.25	2.61
centrobin, centrosomal BRCA2 interacting protein	Hs.348012	3.23	2.79
PWWP domain containing 2B	Hs.527751	3.22	2.76
hypothetical protein MGC10814	Hs.679519	3.20	2.86
Immunoglobulin heavy constant gamma 1 (G1m marker)	Hs.510635	3.19	2.93
Family with sequence similarity 84, member A	Hs.260855	3.19	2.78
transient receptor potential cation channel, subfamily V, member 6	Hs.302740	3.18	2.76
cadherin 15, type 1, M-cadherin (myotubule)	Hs.148090	3.18	3.07
RAS-like, family 10, member B	Hs.437035	3.17	2.78
RAB2A, member RAS oncogene family	Hs.369017	3.17	2.91
PDZ and LIM domain 4	Hs.424312	3.16	2.90
Mitogen-activated protein kinase kinase kinase 7 interacting protein 1	Hs.507681	3.13	2.87
SRY (sex determining region Y)-box 15	Hs.95582	3.12	2.81
transmembrane protein with EGF-like and two follistatin-like domains 2	Hs.144513	3.12	3.09
pre T-cell antigen receptor alpha	Hs.169002	3.12	2.89
pleckstrin homology domain containing, family G (with RhoGef domain) member 5	Hs.284232	3.11	2.88
hypothetical LOC389458	Hs.720724	3.08	2.87
microtubule-associated protein, RP/EB family, member 3	Hs.515860	3.07	2.89
IQ motif containing C	Hs.274356	3.06	3.11
leucine rich repeat containing 16B	Hs.26135	3.05	3.45
leukocyte receptor tyrosine kinase	Hs.434481	3.04	3.04
secretin	Hs.632324	3.04	3.06
mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetyl-glucosaminyltransferase, isozyme B	Hs.144531	3.03	2.82
fucosyltransferase 7 (alpha (1,3) fucosyltransferase)	Hs. 457	3.03	2.59
Neuropeptide B	Hs.585089	3.03	2.75
F-box protein 44	Hs.556006	3.03	2.98
mitogen-activated protein kinase 8 interacting protein 3	Hs.207763	3.01	2.77
hypothetical MGC50722	Hs.530383	2.99	3.02

chorionic gonadotropin, beta polypeptide /// chorionic gonadotropin, beta polypeptide 5 /// chorionic gonadotropin, beta polypeptide 7	Hs.172944	2.97	2.54
REX1, RNA exonuclease 1 homolog (S. cerevisiae)	Hs.192477	2.96	2.73
spermatogenesis associated 21	Hs.705501	2.95	2.63
chromosome 11 open reading frame 30	Hs.352588	2.95	2.96
alpha-2-glycoprotein 1, zinc-binding /// alpha-2-glycoprotein 1, zinc-binding pseudogene 1	Hs.546239	2.95	3.51
S100 calcium binding protein A7A	Hs.442337	2.93	2.52
ELAV (embryonic lethal, abnormal vision, Drosophila)-like 3 (Hu antigen C)	Hs.1701	2.91	2.64
Rho GTPase activating protein 30	Hs.389374	2.90	2.61
MORN repeat containing 1	Hs.642701	2.90	2.66
inositol-3-phosphate synthase 1	Hs.405873	2.90	2.78
rhophilin, Rho GTPase binding protein 1	Hs.521912	2.85	2.81
spectrin, beta, non-erythrocytic 4	Hs.32706	2.84	2.73
tubulin tyrosine ligase-like family, member 9	Hs.712915	2.82	2.81
calcium/calmodulin-dependent protein kinase II delta	Hs.144114	2.82	2.56
Dapper, antagonist of beta-catenin, homolog 3 (Xenopus laevis)	Hs.515490	2.79	2.77
Biogenesis of lysosomal organelles complex-1, subunit 3	Hs.103902	2.78	2.69
platelet-activating factor receptor	Hs.709174	2.78	2.87
transmembrane protein 151A	Hs.399779	2.78	2.79
carboxylesterase 4-like	Hs.535486	2.77	2.91
nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor-like 2	Hs.675285	2.75	2.60
metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)	Hs.642877	2.74	2.61
Hypothetical LOC146880	Hs.117853	2.74	2.67
fms-related tyrosine kinase 4	Hs.646917	2.69	2.56
fibroblast growth factor 18	Hs.87191	2.65	2.59
ATP-binding cassette, sub-family B (MDR/TAP), member 6	Hs.107911	2.62	2.56
hypothetical LOC729177	Hs.712707	2.58	2.57
THAP domain containing, apoptosis associated protein 3	Hs.709655	2.56	2.57
ADAM metallopeptidase with thrombospondin type 1 motif, 7	Hs.16441	2.56	2.56
forkhead box P3	Hs.247700	2.55	2.53
keratin 3	Hs.680652	2.53	2.54

Supplemental Table 2B. Genes up-regulated in PCOS compared to MSEn, all had a corrected $P<0.001$

Gene name	UniGene ID	Fold change PCOScc vs MSEn	Fold change PCOSp vs MSEn
anillin, actin binding protein	Hs.62180	9.06	4.05
topoisomerase (DNA) II alpha 170kDa	Hs.156346	8.59	2.79
PDZ binding kinase	Hs.104741	7.98	3.04
MAD2 mitotic arrest deficient-like 1 (yeast)	Hs.591697	7.50	3.50
topoisomerase (DNA) II alpha 170kDa	Hs.156346	7.18	2.97
hyaluronan-mediated motility receptor (RHAMM)	Hs.72550	7.14	3.21
TTK protein kinase	Hs.169840	6.90	2.99
ribonucleotide reductase M2 polypeptide	Hs.226390	6.81	3.53
cyclin B1	Hs.23960	6.71	3.24
asp (abnormal spindle) homolog, microcephaly associated (Drosophila)	Hs.121028	6.34	2.78
centrosomal protein 55kDa	Hs.14559	6.33	2.99
leukemia inhibitory factor receptor alpha	Hs.133421	5.84	2.93
cyclin E2	Hs.567387	5.44	2.66
helicase, lymphoid-specific	Hs.655830	4.95	3.15
dystrophin	Hs.495912	4.21	2.89
Rac GTPase activating protein 1	Hs.505469	4.02	2.85
LSM5 homolog, U6 small nuclear RNA associated (S. cerevisiae)	Hs.424908	3.56	3.24
TATA element modulatory factor 1	Hs.267632	3.34	2.80
trinucleotide repeat containing 6B	Hs.372082	3.33	2.70
hook homolog 3 (Drosophila)	Hs.162852	3.31	2.87
La ribonucleoprotein domain family, member 4	Hs.26613	3.18	3.30
cell division cycle 6 homolog (S. cerevisiae)	Hs.405958	3.17	3.07
CDC28 protein kinase regulatory subunit 2	Hs.83758	3.10	2.54
LSM5 homolog, U6 small nuclear RNA associated (S. cerevisiae)	Hs.424908	3.09	2.84
B-cell CLL/lymphoma 11A (zinc finger protein)	Hs.370549	2.94	2.87
zinc finger protein 430	Hs.466289	2.94	2.65
mannosidase, endo-alpha	Hs.533323	2.93	2.73
FtsJ methyltransferase domain containing 1	Hs.72782	2.92	2.62
chromosome 12 open reading frame 66	Hs.505871	2.81	2.86
zinc finger, MYM-type 5	Hs.530988	2.76	2.50
lysophosphatidylcholine acyltransferase 2	Hs.460857	2.75	3.17
retinitis pigmentosa 2 (X-linked recessive)	Hs.44766	2.71	2.60
steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)	Hs.552	2.68	2.61
activating transcription factor 1	Hs.648565	2.68	2.60
FUS interacting protein (serine/arginine-rich) 1	Hs.3530	2.64	2.53
ubiquitin-like domain containing CTD phosphatase 1	Hs.591733	2.62	2.67
spastin	Hs.468091	2.51	2.52