

Soy isoflavones induce feminization of Japanese eel (*Anguilla japonica*)

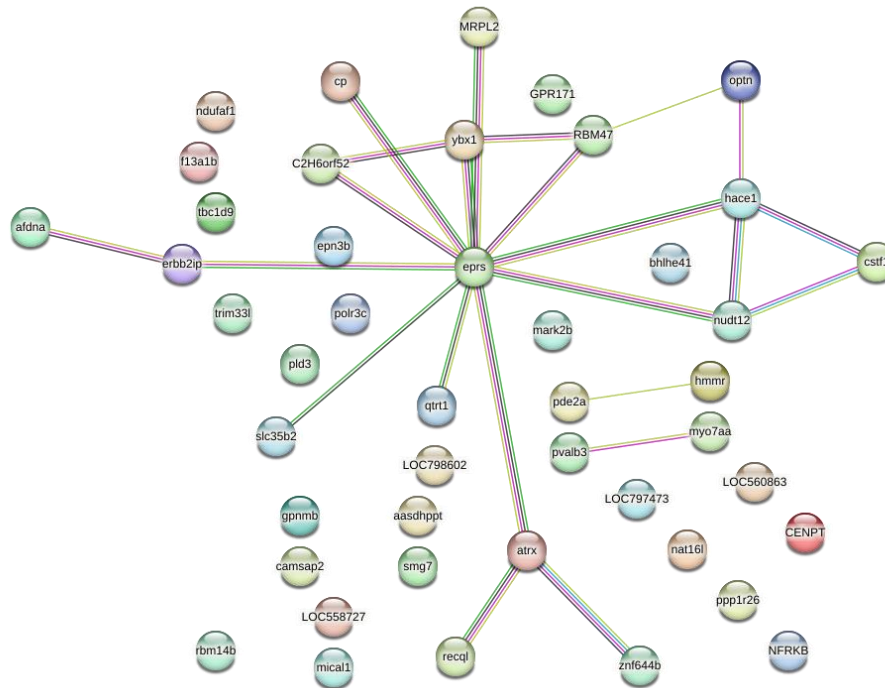
Supplementary Materials

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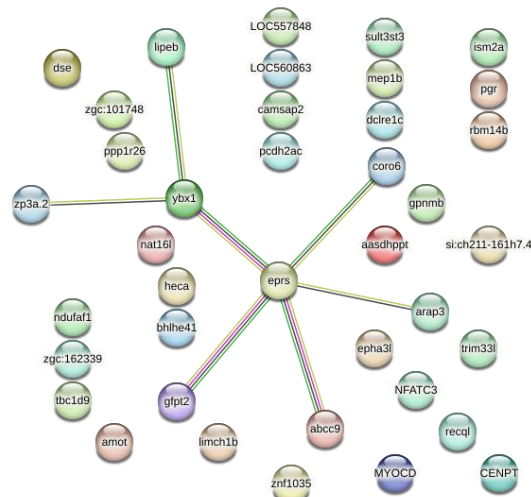
Supplementary Table S1. Differentially expressed genes with FPKM values that changed by >10-fold in E2- and genistein-treated eels compared with the genes of control eels.

| | No. | Tracking_id | Gene name | STRENG protein | GO term | |
|--------------------------------------|------------------------------------|--------------|--|---|---|---|
| I2 up-regulated genes | 1 | MSTRG10868.3 | transcription elongation regulator 1-like isoform X4 | LOC797475 | DNA template transcription; F transcription complex assembly; F RNA polymerase binding | |
| | 2 | MSTRG10827.3 | RNA-binding 14b isoform X3 | thc14b | F RNA binding | |
| | 3 | MSTRG10864.2 | 3p-lysine mediated activity receptor like | hmt49 | Cytoskeleton | |
| | 4 | MSTRG10884.2 | TBC1 domain family member 9b isoform X2 | thc149 | F calcium ion binding | |
| | 5 | MSTRG1072.2 | apoptotic chromatin condensation inducer in the nucleus-like | | F protein transmembrane activity | |
| | 6 | MSTRG11947.1 | Y-box-binding 2 isoform X2 | ybb1 | F nucleic acid binding | |
| | 7 | MSTRG11971.1 | histidine-N-acetyl transferase-like | aid140 | F acetyltransferase activity | |
| | 8 | MSTRG12631.4 | RNA-binding 47-like isoform X2 | RBM47 | F RNA binding; C nucleus | |
| | 9 | MSTRG11158.1 | ATP-dependent DNA helicas Q1 isoform X2 | rmn47 | F DNA replication; F DNA repair; F DNA recombination; F helicase activity; F catalytic activity; acting on DNA; F ATP-ATP-dependent activity; C nucleus | |
| | 10 | MSTRG12442.2 | hypophysect protein | qpps | F cytoplasmic vesicle | |
| | 11 | MSTRG12927.2 | 39S ribosomal protein L2, mitochondrial | MRPL2 | F mitochondrial gene expression; F RNA binding; F structured molecule activity; C mitochondrion; C cytosol | |
| | 12 | MSTRG14896.1 | GMP-dependent 7,5'-cyclic phosphodiesterase isoform X4 | p4dc2a | F nucleic acid metabolic process; F protein modification process; F transmembrane activity; C cytosol | |
| | 13 | MSTRG14952.2 | L-aminoadipate-oxidomethyl de dehydrogenase-phosphoantithetyl transferase isoform X3 | aaodyp1 | F amino acid metabolic process; F cell differentiation; F neuronal structure development; F transmembrane activity; C cytoskeleton; C nucleus | |
| | 14 | MSTRG10421.2 | possible VLA-like isoform X3 | VRG1 | F protein modification process; F cell differentiation; F neuronal structure development; F transmembrane activity; C cytoskeleton; C nucleus | |
| | 15 | MSTRG15005.3 | probable G-coupled receptor 171 | GPR171 | F protein modification process; F cell differentiation; F neuronal structure development; F transmembrane activity; C cytoskeleton; C nucleus | |
| | 16 | MSTRG15282.1 | 5'-N-capsid-associated FLD1 | pld3 | F regulation of DNA template transcription; F neuronal structure development; F RNA binding; F catalytic activity; F transcription regulation activity; C nucleus | |
| | 17 | MSTRG16127.3 | strong stimulation factor subunit 1 | cuf1 | F RNA metabolic process; F RNA binding; F neuronal structure development activity; C nucleus | |
| | 18 | MSTRG16702.2 | ...-NA... | | | |
| | 19 | MSTRG17137.2 | ...-NA... | | | |
| | 20 | MSTRG18465.3 | nucleic factor related to kappa-B binding protein isoform X2 | NFKB1 | C nuclear transmembrane | |
| | 21 | MSTRG16312.2 | transcriptional regulator ATRX-like | atr | F transcription | |
| | 22 | MSTRG20405.1 | quonine 1RNA-oligonucleotide transferase catalytic subunit 1 isoform X1 | qon1 | F RNA metabolic process; F transmembrane activity; F catalytic activity; acting on RNA; C mitochondrion | |
| | 23 | MSTRG20758.1 | class II basic helix-loop-helix 41 isoform X2 | Mbhl41 | F regulation of DNA template transcription; F cell differentiation; F neuronal structure development; F DNA binding; F transcription regulation activity | |
| | 24 | MSTRG21449.1 | F-acyltransferase alpha | pvalb1 | F protein ion binding | |
| | 25 | MSTRG21913.2 | epsin-3-like isoform X2 | epsb3 | F lipid binding | |
| | 26 | MSTRG22482.2 | contaminant 7 isoform X2 | CINPT | F protein modification process | |
| | 27 | MSTRG22606.1 | LOW QUALITY PROTEIN: afadin-like | afadin | F cell adhesion; F signaling; F cell differentiation; F neuronal structure development | |
| | 28 | MSTRG23117.1 | protein SMG7 isoform X8 | smg7 | F protein modification process | |
| | 29 | MSTRG23423.1 | zinc finger 644 | zif644b | F regulation of DNA template transcription; F DNA binding; F transcription regulation activity; C nucleus | |
| | 30 | MSTRG23864.2 | spidulin-W-like | SPIDW602 | F reproductive process | |
| | 31 | MSTRG23972.1 | ...-NA... | | | |
| | 32 | MSTRG25825.1 | phosphatase 1 regulatory subunit 26 isoform X1 | ppp126 | F negative regulation of phosphatase activity; F protein phosphatase inhibitor activity | |
| | 33 | MSTRG26603.2 | peroxisomal NADH pyrophosphatase NUDT12 isoform X1 | nudt12 | F hydrolysis activity; C cytoskeleton | |
| | 34 | MSTRG26951.1 | serine/threonine-protein kinase MARK2-like isoform X9 | mark2b | F protein modification process | |
| | 35 | MSTRG27026.1 | adenosine 3-phosphatase 5-phosphohistidine transferase 1 isoform X2 | C5H2C2 | F cell differentiation; F transmembrane matrix organization; F neuronal structure development; F transmembrane transport; F nucleic acid metabolic process; F transmembrane activity | |
| | 36 | MSTRG28080.1 | GTPase IMAP family member 8-like | LOC50863 | F nucleic acid binding; F GTP binding | |
| | 37 | MSTRG32738.1 | QOR-71 isoform X1 | qorwb | C cytoskeleton; C membrane | |
| | 38 | MSTRG33757.2 | uncharacterized protein rmc1 isoform X2 | LOC558777 | | |
| | 39 | MSTRG33384.1 | DNA-directed RNA polymerase III subunit RPC3 isoform X1 | pdc3c | F DNA template transcription; F DNA binding; C nucleus | |
| | 40 | MSTRG34462.1 | LOW QUALITY PROTEIN: erbb | erbb2p | F regulation of DNA template transcription; F signaling | |
| | 41 | MSTRG4612.6 | RNA sensory protein 1-associated 1-like | C2H46H2 | F nucleic acid binding; C cellular material structure | |
| | 42 | MSTRG5386.1 | transcription intermediate factor 1-alpha-like isoform X2 | trif331 | F transcription | |
| | 43 | MSTRG5789.3 | condolin-isoform X1 | cp | F extracellular matrix activity; C extracellular region | |
| | 44 | MSTRG6174.1 | coagulation factor XIII A-chain-like isoform X1 | f13ab | | |
| | 45 | MSTRG6303.1 | calcitriol-regulated protein-associated 2 isoform X3 | camp2 | F cell differentiation; F neuronal structure development; F cytoskeleton protein binding; C cytoskeleton | |
| | 46 | MSTRG7318.2 | F-actin-monoclonal gamma mif1 isoform X1 | mifc1 | F neuronal structure development; F cytoskeleton protein binding; F transmembrane activity | |
| | 47 | MSTRG25329.2 | glutaryl-prolyl isomerase cytosolic | qpps | F RNA metabolic process; F amino acid metabolic process; F ligase activity; F catalytic activity; acting on RNA | |
| | 48 | MSTRG7362.1 | complex 1 intermediate-associated mitochondrial | ndaf1 | F generation of precursor metabolites and energy; F mitochondrial organization; F protein-containing complex assembly; C mitochondrion | |
| | 49 | MSTRG6992.2 | E2 ubiquitin-ligase HACE1 isoform X1 | hace1 | F protein modification process; F transmembrane activity; F catalytic activity; acting on proteins | |
| I2 down-regulated genes | 1 | MSTRG11227.2 | zinc finger CCHC domain-containing 7 isoform X2 | zncbf7 | F nucleic acid binding; F zinc ion binding | |
| | 2 | MSTRG12780.1 | palmitoyltransferase ZDHHC5-like | zdh5a | F protein modification process; F transmembrane activity; acting on a protein; C plasma membrane | |
| | 3 | MSTRG17585.1 | serine acetyltransferase-like protein X2 | sera1a | F protein transmembrane; F helicase activity; F catalytic activity; acting on a protein; C mitochondrion | |
| | 4 | MSTRG17944.1 | BRD4-interacting chromatin-remodeling complex-associated-like | gicr11 | F positive regulation of DNA template transcription; F CWSN19 complex | |
| | 5 | MSTRG15553.1 | protein-serine O-palmitoyltransferase procaspase-like isoform X2 | procas | F lipid metabolic process; F signaling; F protein modification process; F transmembrane activity; C cytoplasmic vesicle | |
| | 6 | MSTRG12920.1 | nucleosome-associated RP IIb family member 1-like | margr1b | F transcription regulation activity; C cytoskeleton | |
| | 7 | MSTRG14030.1 | nucleosome-associated gamma-lac VW and PZG domain-containing 1b isoform X1 | hace1 | F transcription activity | |
| | 8 | MSTRG16846.2 | several antigens with cold-cell domain and onkyo repeats 1-like isoform X1 | shc472 | F preproliferative cell death; F signaling; C cytoskeleton | |
| | 9 | MSTRG17604.1 | dead binding subfamily B member 2 isoform X5 | dnb2b | | |
| | 10 | MSTRG17879.2 | very-long-chain (C18-31)-hydroxyacyl-CoA dehydrogenase 2-like isoform X1 | pyg1b | F lipid metabolic process; F lipid activity; C cytoplasmic vesicle | |
| | 11 | MSTRG18773.1 | rho GTPase activating factor | ARHGAP36 | F protein modification process | |
| | 12 | MSTRG19188.2 | cytoskeleton 5-like | stc4d | F transmembrane protein transport; F protein-mediated transport; F transmembrane organization; F nucleic acid storage activity; C Golgi apparatus | |
| | 13 | MSTRG19523.2 | transcriptional regulator ATRX-like | atr | C cytoplasm | |
| | 14 | MSTRG20961.2 | ...-NA... | | | |
| | 15 | MSTRG21244.2 | serine/threonine-kinase MARK1 isoform X2 | zg-153725 | F cytoskeleton organization; F protein modification process; F transmembrane activity; F catalytic activity; acting on a protein | |
| | 16 | MSTRG21352.1 | ...-NA... | | | |
| | 17 | MSTRG22116.2 | retinoid acid induced 1-like | LOC50882 | F viral ion binding | |
| | 18 | MSTRG23027.1 | DHS-like nucleosome 2 | LOC566106 | F RNA metabolic process; F RNA binding; F helicase activity; F catalytic activity; acting on RNA; C cytoplasm | |
| | 19 | MSTRG23134.1 | activated CDC42 kinase 1-like isoform X5 | LOC559119 | F signaling; F protein modification process; F transmembrane activity; F catalytic activity; acting on a protein; C nucleus; C plasma membrane | |
| | 20 | MSTRG23242.1 | STRAP-like isoform X1 | zg-167446 | C cytoskeleton; C membrane | |
| | 21 | MSTRG24284.2 | beta-1,2-galactosyl O-glycosyl-lyso-beta-1,6-N-acetylglucosaminyltransferase-like | | F transmembrane activity; F catalytic activity; acting on a protein; C Golgi apparatus | |
| | 22 | MSTRG24889.1 | condolin-beta protein-like 1 isoform X1 | corlin1 | F protein modification; F protein ion binding | |
| | 23 | MSTRG25242.1 | DNA damage-binding 2 isoform X3 | dnb2 | F DNA repair; F damaged DNA binding; C nucleus; C-Golgi ERG1 ubiquitin ligase complex | |
| | 24 | MSTRG25852.1 | oxytetracycline resistant LXR-alpha-like | lxa | F regulation of DNA template transcription; F lipid metabolic process; F signaling; F DNA binding; F nucleic acid metabolic activity; F transcription regulation activity; C nucleus | |
| | 25 | MSTRG25769.2 | BRD1 domain-containing protein BRD1X | brd1x | | |
| | 26 | MSTRG2891.3 | NLR family CARD domain-containing 3-like isoform X2 | sich211-194b16.4 | | |
| | 27 | MSTRG31319.2 | ...-NA... | | | |
| | 28 | MSTRG32844.1 | protein NDORG | ndp2 | F signaling; F cell differentiation; F neuronal structure development | |
| | 29 | MSTRG33023.1 | two pore calcium channel 1-like isoform X6 | tpc1c | F transmembrane transport; F transport activity; C cytoskeleton | |
| | 30 | MSTRG33212.1 | electrogenic sodium bicarbonate cotransporter 1 isoform X3 | slc44a4 | F transmembrane transport; F transport activity | |
| | 31 | MSTRG3871.1 | chromatin protein homolog 5-like | chr5 | F regulation of DNA template transcription; F protein modification process; F transmembrane activity; F catalytic activity; acting on a protein; C nucleus | |
| | 32 | MSTRG3971.2 | ubiquitin-conjugating enzyme E2D1-like protein 1 | UBR2D1.1 | F protein modification process; F transmembrane activity; F catalytic activity; acting on a protein; C nucleus | |
| | 33 | MSTRG21243.1 | antitumor inhibitor 1-like isoform X1 | antib1 | F polypurine biosynthetic process; F regulation of catalytic activity; F catalytic activity; F histidine decarboxylase activator activity | |
| | 34 | MSTRG4642.1 | histidine-A-inhibited gamma nucleotide exchange 2 | arlgf2 | | |
| | 35 | MSTRG10193.1 | chymotrypsin-like elastinase family member 2A | elc1 | F hydrolysis activity; F catalytic activity; acting on a protein; C extracellular space | |
| | 36 | MSTRG9152.1 | vascular 8-like isoform X1 | | F nucleic acid storage activity; C cytosol | |
| | 37 | MSTRG19414.1 | transmembrane-catalyzed 201Da translocase-like 2 | tg202 | F nucleic acid phosphatidyl transferase; F RNA phospholipid bond hydrolysis; F nucleic acid hydrolysis; F F-F transmembrane activity; F nucleic acid binding; F transmembrane activity | |
| | Genistein up-regulated genes | 1 | MSTRG10373.1 | amide sulfotransferase-like | slc1b3 | F transmembrane activity |
| | | 2 | MSTRG11770.1 | ant-GAP with Rho-GAP-ANK repeat and PH domain-containing 3 isoform X1 | arg3 | F signaling; F neuronal structure development; F transmembrane function regulation activity |
| | | 3 | MSTRG20743.1 | ATP-binding cassette sub-family C member 9 isoform X1 | abc9 | F transmembrane transport; F transport activity; F nucleic acid metabolic activity; F ATP-dependent activity |
| | | 4 | MSTRG11158.1 | ATP-dependent DNA helicas Q1 isoform X2 | rmn47 | F DNA replication; F DNA repair; F DNA recombination; F helicase activity; F catalytic activity; acting on DNA; F ATP-ATP-dependent activity; C nucleus |
| | | 5 | MSTRG12920.1 | glutaryl-prolyl isomerase cytosolic | qpps | F RNA metabolic process; F amino acid metabolic process; F ligase activity; F catalytic activity; acting on RNA |
| | | 6 | MSTRG6300.1 | calcitriol-regulated protein-associated 2 isoform X3 | camp2 | F cell differentiation; F neuronal structure development; F cytoskeleton protein binding; C cytoskeleton |
| | | 7 | MSTRG22482.2 | contaminant 7 isoform X2 | CINPT | F protein modification process |
| | | 8 | MSTRG20758.1 | class II basic helix-loop-helix 41 isoform X2 | Mbhl41 | F regulation of DNA template transcription; F cell differentiation; F neuronal structure development; F DNA binding; F transcription regulation activity |
| | | 9 | MSTRG7362.1 | complex 1 intermediate-associated mitochondrial | ndaf1 | F generation of precursor metabolites and energy; F mitochondrial organization; F protein-containing complex assembly; C mitochondrion |
| | | 10 | MSTRG10806.1 | corin-6 | cor6 | F protein modification; F protein modification process; F protein-containing complex assembly; F cytoskeleton protein binding; F helicase activity; F catalytic activity; acting on a protein |
| | | 11 | MSTRG22603.1 | domain-specific sulfatase isoform X1 | dsu | F transmembrane activity |
| | | 12 | MSTRG12383.1 | epsin type A-membrane 3-like isoform X1 | epb1 | F protein modification process; F transmembrane activity; F nucleic acid metabolic activity; F catalytic activity; acting on a protein; C plasma membrane |
| 13 | | MSTRG24421.2 | glutamine-fructose-6-phosphate aminotransferase [isomerizing] 2-like isoform X1 | gfr2 | F protein modification process; F transmembrane transport; F nucleic acid metabolic process; F nucleic acid metabolic process; F nucleic acid metabolic process; F nucleic acid metabolic process | |
| 14 | | MSTRG20603.1 | GTPase IMAP family member 8-like | LOC50863 | F nucleic acid binding; F GTP binding | |
| 15 | | MSTRG25782.1 | histidine-binding isoform X1 | aid10 | F acetyltransferase activity | |
| 16 | | MSTRG11971.1 | histidine-N-acetyl transferase-like | aid10 | F acetyltransferase activity | |
| 17 | | MSTRG25462.2 | hormone-sensitive lipase isoform X3 | lipb | | |
| 18 | | MSTRG22947.1 | isoheme-2 | iso2a | | |
| 19 | | MSTRG10512.1 | L-aminoadipate-oxidomethyl de dehydrogenase-phosphoantithetyl transferase | aaodyp1 | F amino acid metabolic process; F protein modification process; F transmembrane activity; C cytosol | |
| 20 | | MSTRG12628.1 | LIM and calponin homology domains-containing 1-like | limb3b | | |
| 21 | | MSTRG14542.1 | LOW QUALITY PROTEIN: angiotensin | anot | F establishment or maintenance of cell polarity; F neuronal structure development; F cell motility | |
| 22 | | MSTRG24573.1 | myosin A subunit beta-like isoform X1 | myb1b | F protein modification; F catalytic activity; acting on a protein | |
| 23 | | MSTRG15612.1 | myosin phosphatase 1 regulatory subunit 2b isoform X2 | myo126 | F RNA metabolic process; F RNA binding; F transmembrane activity; C cytoskeleton; C mitochondrion; C cytoskeleton | |
| 24 | | MSTRG25825.1 | myosin isoform X2 | MYOCD | | |
| 25 | | MSTRG4281.1 | myosin isoform X6 | MYOCD | | |
| 26 | | MSTRG10612.1 | ...-NA... | | | |
| 27 | | MSTRG12523.4 | ...-NA... | | | |
| 28 | | MSTRG26706.2 | ...-NA... | | | |
| 29 | | MSTRG11778.1 | nucleic factor of activated T-lymphocyte 5-like isoform X2 | NFATY3 | F regulation of DNA template transcription; F signaling; F DNA binding; F transcription regulation activity | |
| 30 | | MSTRG10778.1 | phosphatase 1 regulatory subunit 26 isoform X1 | ppp126 | F negative regulation of phosphatase activity; F protein phosphatase inhibitor activity | |
| 31 | | MSTRG15061.1 | PREDICTED: uncharacterized protein C1orf57 homolog | zg-161339 | | |
| 32 | | MSTRG12596.1 | PREDICTED: uncharacterized protein LOC109964525 isoform X42 | | | |
| 33 | | MSTRG14401.1 | proteoglycan coreceptor type 2 | PF | F regulation of DNA template transcription; F DNA binding; F transcription regulation activity; C nucleus | |
| 34 | | MSTRG23905.2 | proline-rich 12 | LOC557848 | | |
| 35 | | MSTRG11179.1 | protein artemis | daric1 | C nucleus | |
| 36 | | MSTRG10911.1 | proteasomal alpha-3-like isoform X13 | pab2ac | | |
| 37 | | MSTRG13781.1 | QOR-71 isoform X1 | qorwb | C cytoskeleton; C membrane | |
| 38 | | MSTRG10827.3 | RNA-binding 14b isoform X3 | thc14b | F RNA binding | |
| 39 | | MSTRG10894.1 | TBC1 domain family member 9b isoform X2 | thc149 | F calcium ion binding | |
| 40 | | MSTRG13861.1 | transcription intermediate factor 1-alpha-like isoform X2 | trif331 | | |
| 41 | | MSTRG6243.2 | uncharacterized protein sich211-161b7.4 isoform X1 | sich211-161b7.4 | | |
| 42 | | MSTRG26034.1 | uncharacterized protein sich73-30B9.1 | | | |
| 43 | | MSTRG11947.1 | Y-box-binding 2 isoform X2 | ybb1 | F nucleic acid binding | |
| 44 | | MSTRG2715.1 | zinc finger 501-like | zif501b | | |
| 45 | | MSTRG19144.2 | zinc phosphatase domain-binding 3-like | zif612 | F reproductive process; F cell differentiation; F neuronal structure development; F neuronal structure development; F neuronal structure development; F neuronal structure development | |
| Genistein down-regulated genes | | 1 | MSTRG16042.1 | 60S ribosomal protein L18 | rlp18 | F translation |
| | | 2 | MSTRG15554.1 | C-S-C domain transmembrane type 4k | cur4a | F transmembrane transport; F signaling; F cell differentiation; F neuronal structure development; F cell motility; F nucleic acid metabolic process; C cytoskeleton; C plasma membrane |
| | | 3 | MSTRG11770.1 | ant-GAP with Rho-GAP-ANK repeat and PH domain-containing protein 3 | arg3 | F signaling; F protein modification process; F lipid binding; F transcription regulation activity |
| | | 4 | MSTRG14741.2 | A-kinase anchor protein 13-like | akp13 | F protein modification; F protein ion binding; F regulation of catalytic activity; F F-ATP-dependent protein kinase activity; F signal transduction; F signal transduction; F signal transduction |
| | 5 | MSTRG14239.1 | serine/threonine monooxygenase FMO G8/GX-like 4 | LOC793236 | F transmembrane activity; C cytoplasm | |
| | 6 | MSTRG14962.1 | insulin-like growth factor 5-phosphohistidine transferase K isoform X1 | phs1a | F lipid metabolic process; F hydrolysis activity | |
| | 7 | MSTRG19188.2 | cytoskeleton 5-like | stc4d | F transmembrane protein transport; F protein-mediated transport; F transmembrane organization; F nucleic acid storage activity; C Golgi apparatus | |
| | 8 | MSTRG20743.1 | ATP-binding cassette sub-family C member 9 isoform X1 | abc9 | F transmembrane transport; F transport activity; F nucleic acid metabolic activity; F ATP-dependent activity | |
| | 9 | MSTRG23112.1 | ribosome biogenesis protein BM51 homolog isoform X2 | bm11 | F ribosome biogenesis; C nucleus | |
| | 10 | MSTRG22564.4 | ...-NA... | | | |
| | 11 | MSTRG25652.1 | oxytetracycline resistant LXR-alpha-like | lxa1b3 | F regulation of DNA template transcription; F lipid metabolic process; F signaling; F DNA binding; F nucleic acid metabolic activity; F transcription regulation activity; C nucleus | |
| | 12 | MSTRG22778.1 | N-acetylglucosaminidase beta-1,3-N-acetylglucosaminyltransferase 2 | ngt2b | F protein glycosylation; F transmembrane activity; C Golgi apparatus | |
| | 13 | MSTRG24573.1 | myosin phosphatase 1 regulatory subunit 2b isoform X2 | myo126 | F negative regulation of phosphatase activity; F protein phosphatase inhibitor activity | |
| | 14 | MSTRG20829.4 | protein ABHD18 | C14H44d29 | | |
| | 15 | MSTRG27512.1 | alpha-mannosidase 2C1 | | | |
| | 16 | MSTRG3093.1 | ...-NA... | | | |
| | 17 | MSTRG12651.1 | NLR family CARD domain-containing protein 3-like | wn | F hydrolysis activity; F ATP-dependent activity | |
| | 18 | MSTRG34952.1 | Werner syndrome ATP-dependent helicase isoform X1 | C2H46f22 | | |
| | 19 | MSTRG16652.1 | UPF049F homolog C5orf22 homolog | MTRF1 | F regulation of DNA template transcription; F nucleic acid metabolic process; F nucleic acid metabolic process; F DNA binding; C mitochondrion | |
| | 20 | MSTRG5771.2 | transcriptional activator factor 1-mitochondrial | cor33a | F regulation of DNA template transcription; F lipid binding; F catalytic activity | |
| | 21 | MSTRG29242.1 | cytochrome P-450 2C19-like isoform X1 | cor33a | F regulation of DNA template transcription; F lipid binding; F catalytic activity | |
| | 22 | MSTRG6093.2 | ubiquitin and EGR-like domain-containing protein 1 | snd1 | F cell adhesion; F cell differentiation; F neuronal structure development | |
| | 23 | MSTRG6083.2 | uncharacterized protein LOC15112382 isoform X4 | | | |
| | 24 | MSTRG8602.1 | five fatty acid receptor 2-like | sich73-90p23.1 | F signaling; F nucleic acid metabolic activity | |
| | 25 | MSTRG8682.2 | cytoplasmic-associated protein 23-like isoform X1 | zg-56072 | F vesicle-mediated transport; F signaling; F transmembrane organization; F protein-containing complex assembly; F nucleic acid storage activity; C cytoplasm; C membrane | |
| | 26 | MSTRG9229.1 | tubulin gamma and delta complex protein 1 | LOC750754 | | |
| | 27 | MSTRG4612.6 | histidine-binding isoform X1 | aid10 | | |

(A)



(B)



: From curated databases
 : Experimentally determined
 : Gene neighborhood
 : Gene fusions
 : Gene co-occurrence
 : Textmining
 : Co-expression
 : Protein homology

Supplementary Figure S1. Functional and physiological networks visualized by STRING.

(A) Functional and physiological networks within the 49 genes up-regulated by E2

(B) Functional and physiological networks within the 45 genes up-regulated by Genistein