

BP GO:0007018 microtubule-based movement
Annotate: 61
Significant: 9
Expected: 2.26
topGO p-value: 0.0004
Differentially expressed genes in this GO term: Smp_027920 (Tubulin alpha 1 chain); Smp_128200 (kinesin protein kif23); Smp_137660 (kinesin protein KIF20A); Smp_149260 (kinesin family 1); Smp_169360 (kinesin protein kif26a); Smp_173450 (chromosome associated kinesin KIF4A); Smp_193330 (kinesin II 85 kDa subunit); Smp_197070 (kinesin protein KIF6); Smp_212760 (kinesin)

BP GO:0008285 negative regulation of cell proliferation
Annotate: 5
Significant: 3
Expected: 0.19
topGO p-value: 0.0005
Differentially expressed genes in this GO term: Smp_045470 (prospero homeobox protein 2); Smp_137780 (sister chromatid cohesion protein PDS5); Smp_175490 (sister chromatid cohesion protein PDS5)

BP GO:0006260 DNA replication
Annotate: 174
Significant: 28
Expected: 6.45
topGO p-value: 0.0012
Differentially expressed genes in this GO term: Smp_007000 (DNA replication complex GINS protein PSF1); Smp_009030 (ribonucleoside diphosphate reductase large); Smp_032500 (DNA replication licensing factor MCM7); Smp_037590 (dna replication licensing factor mcm3); Smp_042810 (chromosome transmission fidelity protein 18); Smp_046500 (proliferating cell nuclear antigen); Smp_047610 (cell division control protein 45); Smp_052390 (origin recognition complex subunit 5); Smp_054840 (DNA replication licensing factor MCM2); Smp_055500 (DNA polymerase theta); Smp_055890 (ribonucleoside diphosphate reductase subunit M2); Smp_067260 (dna polymerase alpha subunit b); Smp_079050 (DNA primase large subunit); Smp_079560 (DNA replication licensing factor MCM2); Smp_094140 (DNA replication licensing factor MCM6); Smp_124120 (dna polymerase epsilon subunit 2); Smp_127070 (origin recognition complex subunit); Smp_130740 (chromosome transmission fidelity protein 8); Smp_135650 (hypothetical protein); Smp_143490 (DNA replication licensing factor MCM5); Smp_149120 (insect origin recognition complex subunit); Smp_151560 (dna replication licensing factor mcm9); Smp_163340 (protein timeless); Smp_166820 (hypothetical protein); Smp_167540 (dna replication factor cdt1); Smp_172530 (DNA replication licensing factor MCM4); Smp_178260 (DNA polymerase alpha catalytic subunit); Smp_181870 (dna replication licensing factor mcm8)

BP GO:0006334 nucleosome assembly
Annotate: 36
Significant: 6
Expected: 1.33
topGO p-value: 0.0019
Differentially expressed genes in this GO term: Smp_002930 (histone H2A); Smp_040020 (histone H3); Smp_074610 (histone H3); Smp_086860 (histone H2A); Smp_108390 (histone H2B); Smp_162370 (histone H1 gamma)

BP GO:0007076 mitotic chromosome condensation
Annotate: 8
Significant: 3
Expected: 0.3
topGO p-value: 0.0025
Differentially expressed genes in this GO term: Smp_136970 (structural maintenance of chromosomes protein); Smp_166820 (hypothetical protein); Smp_171710 (structural maintenance of chromosomes protein 2)

BP GO:0030162 regulation of proteolysis
Annotate: 5
Significant: 2
Expected: 0.19
topGO p-value: 0.0127
Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0030308 negative regulation of cell growth
Annotate: 5
Significant: 2
Expected: 0.19
topGO p-value: 0.0127
Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0000075 cell cycle checkpoint
Annotate: 5
Significant: 2
Expected: 0.19
topGO p-value: 0.0127
Differentially expressed genes in this GO term: Smp_128870 (nibrin); Smp_167540 (dna replication factor cdt1)

BP GO:0045786 negative regulation of cell cycle
Annotate: 20
Significant: 4
Expected: 0.74
topGO p-value: 0.0134
Differentially expressed genes in this GO term: Smp_128870 (nibrin); Smp_135060 (bollus pemphigoid antigen); Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0006268 DNA unwinding involved in DNA replication
Annotate: 14
Significant: 3
Expected: 0.52
topGO p-value: 0.0135
Differentially expressed genes in this GO term: Smp_054840 (DNA replication licensing factor MCM2); Smp_079560 (DNA replication licensing factor MCM2); Smp_135650 (hypothetical protein)

BP GO:0006310 DNA recombination

Annotate: 41
Significant: 5
Expected: 1.52
topGO p-value: 0.0169
Differentially expressed genes in this GO term: Smp_124230 (dna repair protein rad51 1); Smp_128870 (nibrin); Smp_152670 (crossover junction endonuclease EME1); Smp_160630 (DNA repair protein RAD51 3); Smp_199150 (rho guanine nucleotide exchange factor 3)

BP GO:0006289 nucleotide-excision repair
Annotate: 16
Significant: 3
Expected: 0.59
topGO p-value: 0.0197
Differentially expressed genes in this GO term: Smp_083710 (Fanconi anemia); Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0006275 regulation of DNA replication
Annotate: 7
Significant: 2
Expected: 0.26
topGO p-value: 0.0254
Differentially expressed genes in this GO term: Smp_046500 (proliferating cell nuclear antigen); Smp_163340 (protein timeless)

BP GO:0007218 neuropeptide signaling pathway
Annotate: 7
Significant: 2
Expected: 0.26
topGO p-value: 0.0254
Differentially expressed genes in this GO term: Smp_099670 (lipoprotein receptor); Smp_159950 (neuropeptide Y prohormone 1)

BP GO:0032270 positive regulation of cellular protein metabolic process
Annotate: 7
Significant: 2
Expected: 0.26
topGO p-value: 0.0254
Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0007126 meiotic nuclear division
Annotate: 8
Significant: 2
Expected: 0.3
topGO p-value: 0.0331
Differentially expressed genes in this GO term: Smp_128870 (nibrin); Smp_163340 (protein timeless)

BP GO:0009186 deoxyribonucleoside diphosphate metabolic process
Annotate: 6
Significant: 2

Expected: 0.22
topGO p-value: 0.0369
Differentially expressed genes in this GO term: Smp_055890 (ribonucleoside diphosphate reductase subunit M2); Smp_141540 (Thymidine kinase 2)

BP GO:0006259 DNA metabolic process
Annotate: 319
Significant: 46
Expected: 11.82
topGO p-value: 0.0374
Differentially expressed genes in this GO term: Smp_007000 (DNA replication complex GINS protein PSF1); Smp_009030 (ribonucleoside diphosphate reductase large); Smp_032500 (DNA replication licensing factor MCM7); Smp_033700 (deoxyribodipyrimidine photo lyase); Smp_037590 (dna replication licensing factor mcm3); Smp_042810 (chromosome transmission fidelity protein 18); Smp_046500 (proliferating cell nuclear antigen); Smp_047610 (cell division control protein 45); Smp_052390 (origin recognition complex subunit 5); Smp_054840 (DNA replication licensing factor MCM2); Smp_055500 (DNA polymerase theta); Smp_055890 (ribonucleoside diphosphate reductase subunit M2); Smp_067260 (dna polymerase alpha subunit b); Smp_075110 (cell cycle checkpoint protein rad1); Smp_079050 (DNA primase large subunit); Smp_079560 (DNA replication licensing factor MCM2); Smp_083710 (Fanconi anemia); Smp_094140 (DNA replication licensing factor MCM6); Smp_106040 (Structure specific endonuclease SLX1); Smp_124120 (dna polymerase epsilon subunit 2); Smp_124230 (dna repair protein rad51 1); Smp_127070 (origin recognition complex subunit); Smp_128870 (nibrin); Smp_130740 (chromosome transmission fidelity protein 8); Smp_130760 (Mediator of DNA damage checkpoint protein 1); Smp_132510 (breast cancer type 1 susceptibility protein); Smp_133990 (DNA topoisomerase 2 binding protein 1); Smp_135650 (hypothetical protein); Smp_136160 (hypothetical protein); Smp_136970 (structural maintenance of chromosomes protein); Smp_139530 (cellular tumor antigen P53); Smp_143490 (DNA replication licensing factor MCM5); Smp_149120 (insect origin recognition complex subunit); Smp_151560 (dna replication licensing factor mcm9); Smp_152670 (crossover junction endonuclease EME1); Smp_160630 (DNA repair protein RAD51 3); Smp_162340 (serine:threonine protein kinase ATR); Smp_163340 (protein timeless); Smp_166820 (hypothetical protein); Smp_167540 (dna replication factor cdt1); Smp_171710 (structural maintenance of chromosomes protein 2); Smp_172530 (DNA replication licensing factor MCM4); Smp_178260 (DNA polymerase alpha catalytic subunit); Smp_181870 (dna replication licensing factor mcm8); Smp_193360 (Fanconi anemia group I protein); Smp_199150 (rho guanine nucleotide exchange factor 3)

BP GO:0051336 regulation of hydrolase activity
Annotate: 9
Significant: 2
Expected: 0.33
topGO p-value: 0.0415
Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0043085 positive regulation of catalytic activity
Annotate: 9
Significant: 2
Expected: 0.33
topGO p-value: 0.0415

Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)

BP GO:0009607 response to biotic stimulus

Annotate: 9

Significant: 2

Expected: 0.33

topGO p-value: 0.0415

Differentially expressed genes in this GO term: Smp_136160 (hypothetical protein); Smp_139530 (cellular tumor antigen P53)