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GO term enrichment of up-regulated genes

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### BP GO:0001932 regulation of protein phosphorylation  
# Annotate: 17  
# Significant: 6  
# Expected: 1  
# topGO p-value: 0.0003  
# Differentially expressed genes in this GO term: Smp\_030400 (cAMP dependent protein kinase type I beta); Smp\_078230 (cGMP dependent protein kinase); Smp\_131050 (cAMP dependent protein kinase R2); Smp\_150300 (MAP kinase activating death domain); Smp\_151100 (cGMP dependent protein kinase); Smp\_171820 (neuropathy target esterase:swiss cheese)

### BP GO:0035023 regulation of Rho protein signal transduction  
# Annotate: 26  
# Significant: 7  
# Expected: 1.53  
# topGO p-value: 0.0006  
# Differentially expressed genes in this GO term: Smp\_127770 (ras GTP exchange factor); Smp\_155990 (guanine nucleotide exchange factor); Smp\_172650 (rho guanine nucleotide exchange factor); Smp\_173060 (rho guanine nucleotide); Smp\_176430 (pleckstrin y domain containing family G); Smp\_176920 (neuronal RhoA GEF protein); Smp\_196300 (FERM)

### BP GO:0007160 cell-matrix adhesion  
# Annotate: 8  
# Significant: 4  
# Expected: 0.47  
# topGO p-value: 0.0007  
# Differentially expressed genes in this GO term: Smp\_150770 (teneurin); Smp\_158350 (integrin alpha 7); Smp\_173540 (integrin alpha ps); Smp\_181010 (integrin alpha ps)

### BP GO:0007229 integrin-mediated signaling pathway  
# Annotate: 9  
# Significant: 4  
# Expected: 0.53  
# topGO p-value: 0.0012  
# Differentially expressed genes in this GO term: Smp\_150770 (teneurin); Smp\_158350 (integrin alpha 7); Smp\_173540 (integrin alpha ps); Smp\_181010 (integrin alpha ps)

### BP GO:0006094 gluconeogenesis  
# Annotate: 6  
# Significant: 3  
# Expected: 0.35  
# topGO p-value: 0.0036  
# Differentially expressed genes in this GO term: Smp\_005880 (phosphoenolpyruvate carboxykinase); Smp\_141360 (pyruvate carboxylase); Smp\_188100 (hypothetical protein)

### BP GO:0051056 regulation of small GTPase mediated signal transduction  
# Annotate: 54  
# Significant: 12  
# Expected: 3.18  
# topGO p-value: 0.0038  
# Differentially expressed genes in this GO term: Smp\_053100 (rap guanine nucleotide exchange factor 6); Smp\_127770 (ras GTP exchange factor); Smp\_146060 (Ral GTPase activating protein subunit alpha 1); Smp\_148460 (neurofibromin); Smp\_154850 (GTPase activating Rap:Ran GAP domain); Smp\_155990 (guanine nucleotide exchange factor); Smp\_172650 (rho guanine nucleotide exchange factor); Smp\_173060 (rho guanine nucleotide); Smp\_176430 (pleckstrin y domain containing family G); Smp\_176920 (neuronal RhoA GEF protein); Smp\_196300 (FERM); Smp\_199010 (ras GTP exchange factor son of sevenless)

### BP GO:0006811 ion transport  
# Annotate: 409  
# Significant: 56  
# Expected: 24.12  
# topGO p-value: 0.0047  
# Differentially expressed genes in this GO term: Smp\_004730 (high voltage-activated calcium channel cav2b); Smp\_016600 (solute carrier family 1); Smp\_020170 (high voltage-activated calcium channel Cav2A); Smp\_052630 (amiloride sensitive sodium channel); Smp\_104500 (phospholipid transporting ATPase IA); Smp\_123830 (collagen alpha (xi) chain); Smp\_124530 (voltage dependent calcium channel subunit); Smp\_126540 (hypothetical protein); Smp\_126580 (calcium activated potassium channel); Smp\_127940 (sodium driven chloride bicarbonate exchanger); Smp\_130300 (Na+:K+ ATPase alpha subunit); Smp\_130890 (transient receptor potential cation channel); Smp\_135140 (high voltage-activated calcium channel beta subunit 1); Smp\_136030 (anion exchange protein); Smp\_136440 (voltage gated potassium channel); Smp\_137170 (plasma membrane calcium transporting ATPase); Smp\_140920 (Glutamate receptor); Smp\_141530 (hypothetical protein); Smp\_143710 (gamma aminobutyric acid receptor subunit); Smp\_144760 (monocarboxylate transporter); Smp\_145320 (solute carrier family 26); Smp\_147140 (transient receptor potential cation channel); Smp\_147390 (glutamate (NMDA) receptor subunit epsilon 2); Smp\_149880 (major facilitator superfamily domain containing protein); Smp\_151000 (cationic amino acid transporter); Smp\_151090 (cationic amino acid transporter); Smp\_152350 (potassium voltage gated channel subfamily H); Smp\_152480 (cyclic nucleotide gated cation channel); Smp\_152500 (cyclic nucleotide gated cation channel); Smp\_152830 (sodium calcium exchanger); Smp\_153000 (hypothetical protein); Smp\_153100 (hyperpolarization activated cyclic); Smp\_156150 (small conductance calcium activated potassium); Smp\_159990 (Voltage gated calcium channel); Smp\_160780 (potassium voltage gated channel protein); Smp\_161630 (transient receptor potential cation channel); Smp\_163090 (voltage gated potassium channel); Smp\_163820 (phospholipid transporting ATPase IF); Smp\_166910 (calcium activated potassium channel); Smp\_169150 (short transient receptor potential channel 3); Smp\_170140 (hypothetical protein); Smp\_171740 (multidrug resistance associated protein 1); Smp\_175020 (hypothetical protein); Smp\_176130 (plasma membrane calcium transporting ATPase); Smp\_176310 (nicotinic acetylcholine receptor subunit type); Smp\_176730 (Cys loop ligand gated ion channel subunit); Smp\_179310 (P2X ATP gated ion channel); Smp\_180950 (band 3 anion transport protein); Smp\_181230 (phospholipid transporting atpase); Smp\_196370 (potassium voltage gated channel subfamily H); Smp\_196720 (atpase class vi type c); Smp\_197640 (sodium leak channel non selective protein); Smp\_197680 (transient receptor potential cation channel); Smp\_198430 (solute

carrier family 12); Smp\_199210 (plasma membrane calcium transporting ATPase); Smp\_205110 (p2X purinoceptor 4)

### BP GO:0006813 potassium ion transport  
# Annotate: 78  
# Significant: 11  
# Expected: 4.6  
# topGO p-value: 0.0057  
# Differentially expressed genes in this GO term: Smp\_126580 (calcium activated potassium channel); Smp\_136440 (voltage gated potassium channel); Smp\_152350 (potassium voltage gated channel subfamily H); Smp\_152830 (sodium calcium exchanger); Smp\_153100 (hyperpolarization activated cyclic); Smp\_156150 (small conductance calcium activated potassium); Smp\_160780 (potassium voltage gated channel protein); Smp\_163090 (voltage gated potassium channel); Smp\_166910 (calcium activated potassium channel); Smp\_196370 (potassium voltage gated channel subfamily H); Smp\_197640 (sodium leak channel non selective protein)

### BP GO:0016197 endosomal transport  
# Annotate: 8  
# Significant: 3  
# Expected: 0.47  
# topGO p-value: 0.0091  
# Differentially expressed genes in this GO term: Smp\_125550 (protein RIC1); Smp\_164130 (protein dopey 1); Smp\_171490 (Vacuolar protein sorting associated protein 13D)

### BP GO:0007169 transmembrane receptor protein tyrosine kinase signaling pathway  
# Annotate: 33  
# Significant: 6  
# Expected: 1.95  
# topGO p-value: 0.0115  
# Differentially expressed genes in this GO term: Smp\_093930 (Receptor Tyrosine Kinase); Smp\_124210 (ephrin type A receptor 4 A); Smp\_136550 (tyrosine protein kinase transmembrane receptor); Smp\_142620 (atrial natriuretic peptide receptor 1); Smp\_149460 (Tyrosine Kinase); Smp\_175590 (fibroblast growth factor receptor a)

### BP GO:0006820 anion transport  
# Annotate: 100  
# Significant: 15  
# Expected: 5.9  
# topGO p-value: 0.0124  
# Differentially expressed genes in this GO term: Smp\_016600 (solute carrier family 1); Smp\_123830 (collagen alpha (xi) chain); Smp\_126540 (hypothetical protein); Smp\_127940 (sodium driven chloride bicarbonate exchanger); Smp\_136030 (anion exchange protein); Smp\_143710 (gamma aminobutyric acid receptor subunit); Smp\_144760 (monocarboxylate transporter); Smp\_145320 (solute carrier family 26); Smp\_151000 (cationic amino acid transporter); Smp\_151090 (cationic amino acid transporter); Smp\_153000 (hypothetical protein); Smp\_176730 (Cys loop ligand gated ion channel subunit); Smp\_180950 (band 3 anion transport protein); Smp\_196720 (atpase class vi type c); Smp\_198430 (solute carrier family 12)

### BP GO:0006941 striated muscle contraction  
# Annotate: 160  
# Significant: 17  
# Expected: 9.44  
# topGO p-value: 0.0128  
# Differentially expressed genes in this GO term: Smp\_021920 (paramyosin); Smp\_076500 (dystrophin); Smp\_123730 (spectrin beta chain); Smp\_128930 (spectrin beta chain); Smp\_130810 (dynein heavy chain); Smp\_138620 (microtubule actin cross linking factor 1); Smp\_139810 (coiled coil domain containing protein 39); Smp\_144020 (glutamine rich protein 2); Smp\_146420 (Spindle assembly checkpoint component MAD1); Smp\_149910 (lar interacting protein (lip) protein); Smp\_165620 (dynein heavy chain); Smp\_165820 (dynein heavy chain); Smp\_165890 (rab6 interacting protein 2:elks:erc:cast); Smp\_172330 (myosin xviiiia); Smp\_175450 (hydrocephalus inducing protein); Smp\_176300 (dynein heavy chain); Smp\_197770 (ERC protein 2)

### BP GO:0050896 response to stimulus  
# Annotate: 862  
# Significant: 80  
# Expected: 50.84  
# topGO p-value: 0.0169  
# Differentially expressed genes in this GO term: Smp\_005190 (mitogen activated protein kinase kinase kinase); Smp\_017730 (200-kDa GPI-anchored surface glycoprotein); Smp\_024190 (transformation:transcription domain associated); Smp\_030400 (cAMP dependent protein kinase type I beta); Smp\_044060 (high affinity cAMP specific and IBMX insensitive); Smp\_052630 (amiloride sensitive sodium channel); Smp\_052660 (metabotropic glutamate receptor 3); Smp\_053100 (rap guanine nucleotide exchange factor 6); Smp\_076400 (universal stress protein); Smp\_078230 (cGMP dependent protein kinase); Smp\_083940 (rhodopsin orphan GPCR); Smp\_085910 (smad family member 2); Smp\_093930 (Receptor Tyrosine Kinase); Smp\_103360 (protein kinase); Smp\_122680 (oligophrenin 1); Smp\_122910 (Serine:threonine protein kinase mTOR); Smp\_124210 (ephrin type A receptor 4 A); Smp\_124250 (high affinity cGMP specific 3'); Smp\_125160 (smoothed); Smp\_127770 (ras GTP exchange factor); Smp\_129270 (camp specific 3'); Smp\_131050 (cAMP dependent protein kinase R2); Smp\_131190 (eye specific diacylglycerol kinase); Smp\_133250 (discoidin domain containing receptor 2); Smp\_133690 (discoidin domain containing receptor 2); Smp\_133880 (cd109 antigen); Smp\_134590 (unc 13 (munc13)); Smp\_136440 (voltage gated potassium channel); Smp\_136520 (general transcription factor IIH subunit 2); Smp\_136550 (tyrosine protein kinase transmembrane receptor); Smp\_138150 (rho type gtpase activating protein); Smp\_139180 (frizzled 5); Smp\_139530 (cellular tumor antigen P53); Smp\_141980 (cAMP specific 3'); Smp\_142620 (atrial natriuretic peptide receptor 1); Smp\_143300 (fibrillin 1); Smp\_143710 (gamma aminobutyric acid receptor subunit); Smp\_145700 (ankyrin :unc); Smp\_145900 (sphingolipid delta(4) desaturase:C4 hydroxylase); Smp\_146060 (Ral GTPase activating protein subunit alpha 1); Smp\_146120 (high affinity cGMP specific 3'); Smp\_148460 (neurofibromin); Smp\_149460 (Tyrosine Kinase); Smp\_149580 (fmrfamide receptor); Smp\_150300 (MAP kinase activating death domain); Smp\_150370 (metabotropic glutamate receptor); Smp\_150730 (discoidin domain containing receptor 2); Smp\_150770 (teneurin); Smp\_151100 (cGMP dependent protein kinase); Smp\_152280 (beta arrestin); Smp\_152290 (beta arrestin 1); Smp\_152350 (potassium voltage gated channel subfamily H); Smp\_152480 (cyclic nucleotide gated cation channel); Smp\_152830 (sodium calcium exchanger); Smp\_154850 (GTPase activating Rap:Ran GAP domain); Smp\_155990 (guanine nucleotide exchange factor); Smp\_156210 (serotonin receptor partial); Smp\_158350 (integrin alpha 7); Smp\_159570 (neurexin 4); Smp\_161380 (DNA polymerase gamma); Smp\_164580 (rho GTPase activating protein 190); Smp\_171820 (neuropathy target esterase:swiss cheese); Smp\_172650 (rho guanine

nucleotide exchange factor); Smp\_172740 (Ras GTPase domain containing protein); Smp\_173060 (rho guanine nucleotide); Smp\_173540 (integrin alpha ps); Smp\_175590 (fibroblast growth factor receptor a); Smp\_175760 (dnaj subfamily c); Smp\_176070 (ralA binding protein 1); Smp\_176430 (pleckstrin y domain containing family G); Smp\_176730 (Cys loop ligand gated ion channel subunit); Smp\_176920 (neuronal RhoA GEF protein); Smp\_179590 (dual 3'); Smp\_180150 (Rho GTPase activating protein 21); Smp\_181010 (integrin alpha ps); Smp\_196300 (FERM); Smp\_196370 (potassium voltage gated channel subfamily H); Smp\_199010 (ras GTP exchange factor son of sevenless); Smp\_212300 (Rho GTPase activator (Rgd1)); Smp\_212600 (protein kinase)

### BP GO:0007601 visual perception  
# Annotate: 10  
# Significant: 3  
# Expected: 0.59  
# topGO p-value: 0.0179  
# Differentially expressed genes in this GO term: Smp\_149580 (fmrfamide receptor); Smp\_152280 (beta arrestin); Smp\_152290 (beta arrestin 1)

### BP GO:0044710 single-organism metabolic process  
# Annotate: 1088  
# Significant: 47  
# Expected: 64.17  
# topGO p-value: 0.0346  
# Differentially expressed genes in this GO term: Smp\_005880 (phosphoenolpyruvate carboxykinase); Smp\_017230 (nicotinamide phosphoribosyltransferase); Smp\_024190 (transformation:transcription domain associated); Smp\_026700 (tRNA dihydrouridine synthase 4); Smp\_043390 (beta D xylosidase 2); Smp\_044820 (phospholipase C beta); Smp\_056370 (deoxyhypusine hydroxylase:monooxygenase); Smp\_079380 (serine palmitoyltransferase 2); Smp\_096270 (valyl tRNA synthetase); Smp\_104500 (phospholipid transporting ATPase IA); Smp\_122910 (Serine:threonine protein kinase mTOR); Smp\_123710 (acetyl-CoA carboxylase); Smp\_127730 (ATP citrate synthase); Smp\_128690 (glycine dehydrogenase (decarboxylating)); Smp\_130300 (Na+:K+ ATPase alpha subunit); Smp\_133700 (UDP glucose:glycoprotein glucosyltransferase 1); Smp\_133880 (cd109 antigen); Smp\_136520 (general transcription factor IIH subunit 2); Smp\_137170 (plasma membrane calcium transporting ATPase); Smp\_139530 (cellular tumor antigen P53); Smp\_141360 (pyruvate carboxylase); Smp\_141810 (hypothetical protein); Smp\_142030 (5' AMP activated protein kinase subunit gamma); Smp\_142620 (atrial natriuretic peptide receptor 1); Smp\_145900 (sphingolipid delta(4) desaturase:C4 hydroxylase); Smp\_146330 (1 phosphatidylinositol 4); Smp\_146640 (like glycosyltransferase); Smp\_146910 (choline acetyltransferase); Smp\_147040 (glutaminase); Smp\_147390 (glutamate (NMDA) receptor subunit epsilon 2); Smp\_149310 (lipoxygenase y domain containing protein); Smp\_150300 (MAP kinase activating death domain); Smp\_150660 (phosphatidylinositol 4 kinase); Smp\_155270 (HMG-CoA synthase); Smp\_156550 (alpha amylase); Smp\_161380 (DNA polymerase gamma); Smp\_162660 (glutamine dependent NAD(+) synthetase); Smp\_171820 (neuropathy target esterase:swiss cheese); Smp\_175320 (GPI inositol deacylase); Smp\_177020 (PhosphoLipase C Like family member (pll 1)); Smp\_181230 (phospholipid transporting atpase); Smp\_188100 (hypothetical protein); Smp\_199210 (plasma membrane calcium transporting ATPase); Smp\_211270 (C terminal binding protein); Smp\_211310 (soluble guanylate cyclase gcy); Smp\_212790 (histone deacetylase); Smp\_214370 (alpha(13)fucosyltransferase)

### BP GO:0030212 hyaluronan metabolic process

# Annotate: 6  
# Significant: 2  
# Expected: 0.35  
# topGO p-value: 0.0444  
# Differentially expressed genes in this GO term: Smp\_124530 (voltage dependent calcium channel subunit); Smp\_134050 (voltage dependent calcium channel subunit)

### BP GO:0030238 male sex determination  
# Annotate: 6  
# Significant: 2  
# Expected: 0.35  
# topGO p-value: 0.0444  
# Differentially expressed genes in this GO term: Smp\_131260 (pangolin); Smp\_148110 (transcription factor SOX 14)

### BP GO:0007050 cell cycle arrest  
# Annotate: 6  
# Significant: 2  
# Expected: 0.35  
# topGO p-value: 0.0444  
# Differentially expressed genes in this GO term: Smp\_135060 (bollus pemphigoid antigen); Smp\_138620 (microtubule actin cross linking factor 1)

### BP GO:0006526 arginine biosynthetic process  
# Annotate: 6  
# Significant: 2  
# Expected: 0.35  
# topGO p-value: 0.0444  
# Differentially expressed genes in this GO term: Smp\_141360 (pyruvate carboxylase); Smp\_147390 (glutamate (NMDA) receptor subunit epsilon 2)

### BP GO:0016042 lipid catabolic process  
# Annotate: 24  
# Significant: 4  
# Expected: 1.42  
# topGO p-value: 0.0496  
# Differentially expressed genes in this GO term: Smp\_044820 (phospholipase C beta); Smp\_141810 (hypothetical protein); Smp\_146330 (1 phosphatidylinositol 4); Smp\_177020 (PhosphoLipase C Like family member (pll 1))

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GO term enrichment of down-regulated genes  
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### BP GO:0006626 protein targeting to mitochondrion  
# Annotate: 7  
# Significant: 3  
# Expected: 0.11

# topGO p-value: 0.0001  
# Differentially expressed genes in this GO term: Smp\_123240 (hypothetical protein); Smp\_148560 (MMP37 protein); Smp\_176760 (metaxin 1)

### BP GO:0044743 intracellular protein transmembrane import  
# Annotate: 6  
# Significant: 2  
# Expected: 0.09  
# topGO p-value: 0.0036  
# Differentially expressed genes in this GO term: Smp\_123240 (hypothetical protein); Smp\_148560 (MMP37 protein)

### BP GO:1990542 mitochondrial transmembrane transport  
# Annotate: 7  
# Significant: 2  
# Expected: 0.11  
# topGO p-value: 0.0049  
# Differentially expressed genes in this GO term: Smp\_123240 (hypothetical protein); Smp\_148560 (MMP37 protein)

### BP GO:0006457 protein folding  
# Annotate: 102  
# Significant: 6  
# Expected: 1.61  
# topGO p-value: 0.0053  
# Differentially expressed genes in this GO term: Smp\_020920 (dnaJ subfamily B); Smp\_021800 (prefoldin subunit 3); Smp\_080150 (peptidyl prolyl cis trans isomerase 3); Smp\_083450 (dnaj subfamily c); Smp\_094680 (heat shock protein 70); Smp\_097380 (heat shock 10 kDa protein 1)

### BP GO:0006364 rRNA processing  
# Annotate: 120  
# Significant: 6  
# Expected: 1.9  
# topGO p-value: 0.0115  
# Differentially expressed genes in this GO term: Smp\_029750 (hypothetical protein); Smp\_044280 (rRNA 2' O methyltransferase fibrillar); Smp\_145800 (ribosome production factor 1); Smp\_148920 (ribosomal RNA methyltransferase); Smp\_149070 (Nucleolar protein 6); Smp\_214030 (metallo beta lactamase domain containing protein)

### BP GO:0051028 mRNA transport  
# Annotate: 95  
# Significant: 5  
# Expected: 1.5  
# topGO p-value: 0.0169  
# Differentially expressed genes in this GO term: Smp\_015690 (nAChR subunit (ShAR1 beta2)); Smp\_047320 (hypothetical protein); Smp\_064640 (tRNA selenocysteine 1 associated protein 1); Smp\_090370 (nucleoporin 50 kDa); Smp\_103470 (protein mago nashi)

### BP GO:0008152 metabolic process

# Annotate: 3870  
# Significant: 69  
# Expected: 61.21  
# topGO p-value: 0.0203  
# Differentially expressed genes in this GO term: Smp\_004000 (RNA binding protein EIF1AD); Smp\_008545 (heat shock protein 60); Smp\_009320 (transcription elongation factor b polypeptide 1); Smp\_009430 (steroid dehydrogenase); Smp\_011150 (threonine aspartase 1); Smp\_012400 (protein tyrosine phosphatase mitochondrial); Smp\_013470 (small subunit ribosomal protein S2e); Smp\_015690 (nAChR subunit (ShAR1 beta2)); Smp\_020920 (dnaJ subfamily B); Smp\_023250 (DNA:RNA binding protein KIN17); Smp\_029750 (hypothetical protein); Smp\_031920 (hypothetical protein); Smp\_038300 (enhancer of yellow 2 transcription factor); Smp\_043200 (serine:threonine protein kinase rio2); Smp\_044280 (rRNA 2' O methyltransferase fibrillar); Smp\_046160 (protein phosphatase inhibitor 2); Smp\_047320 (hypothetical protein); Smp\_058530 (hypothetical protein); Smp\_061590 (regulator of nonsense transcripts 1); Smp\_064260 (exosome component; exosome complex component rrp); Smp\_064640 (tRNA selenocysteine 1 associated protein 1); Smp\_065160 (taz protein (tafazzin)); Smp\_068760 (mitochondrial ribosomal protein S24); Smp\_070860 (malate dehydrogenase 1b); Smp\_072460 (phosphomevalonate kinase); Smp\_073510 (dual specificity mitogen activated protein); Smp\_074230 (DNA directed RNA polymerase II subunit RPB4); Smp\_075380 (hypothetical protein); Smp\_076300 (forkhead box protein F1); Smp\_076580 (Retinol dehydrogenase 12); Smp\_077670 (tRNA guanosine 2' O methyltransferase TRM11); Smp\_080530 (replication protein A 32 kDa subunit); Smp\_083450 (dnaj subfamily c); Smp\_085500 (elongator complex protein 3); Smp\_089050 (zinc finger); Smp\_098950 (tata box binding protein); Smp\_099560 (nuclear fragile X mental retardation interacting); Smp\_103470 (protein mago nashi); Smp\_122940 (ataxin 3); Smp\_130170 (NEDD8); Smp\_136090 (hypothetical protein); Smp\_140270 (carbonyl reductase 1); Smp\_140530 (replication factor c subunit 2); Smp\_143670 (RNA polymerase I specific transcription); Smp\_145640 (forkhead protein: forkhead protein domain); Smp\_145800 (ribosome production factor 1); Smp\_146190 (40S ribosomal protein S21); Smp\_148920 (ribosomal RNA methyltransferase); Smp\_149070 (Nucleolar protein 6); Smp\_156450 (regulator of nonsense transcripts 2); Smp\_157370 (ribosomal protein s kinase alpha); Smp\_162710 (serine:threonine protein kinase 6); Smp\_163450 (tubulin polyglutamylase ttl14); Smp\_163610 (GST class mu; SM26:2 antigen; glutathione); Smp\_170260 (hypothetical protein); Smp\_173650 (High mobility group protein 20A); Smp\_175750 (fumarylacetoacetate hydrolase domain containing protein); Smp\_179010 (exosome complex component RRP42); Smp\_179080 (hypothetical protein); Smp\_196120 (transformation:transcription domain associated); Smp\_208050 (histidine triad nucleotide binding protein); Smp\_210180 (hypothetical protein); Smp\_210230 (SEL 1protein); Smp\_211120 (Circulating cathodic antigen); Smp\_213130 (ribosomal protein S25); Smp\_213340 (hypothetical protein); Smp\_214030 (metallo beta lactamase domain containing protein); Smp\_214080 (Zinc finger); Smp\_900100 (NADH dehydrogenase subunit 3)

### BP GO:0032259 methylation

# Annotate: 21  
# Significant: 2  
# Expected: 0.33  
# topGO p-value: 0.0428  
# Differentially expressed genes in this GO term: Smp\_077670 (tRNA guanosine 2' O methyltransferase TRM11); Smp\_148920 (ribosomal RNA methyltransferase)

### BP GO:1903047 mitotic cell cycle process

# Annotate: 94



# Significant: 2  
# Expected: 1.49  
# topGO p-value: 0.0469  
# Differentially expressed genes in this GO term: Smp\_169070 (protein sfil);  
Smp\_196120 (transformation:transcription domain associated)