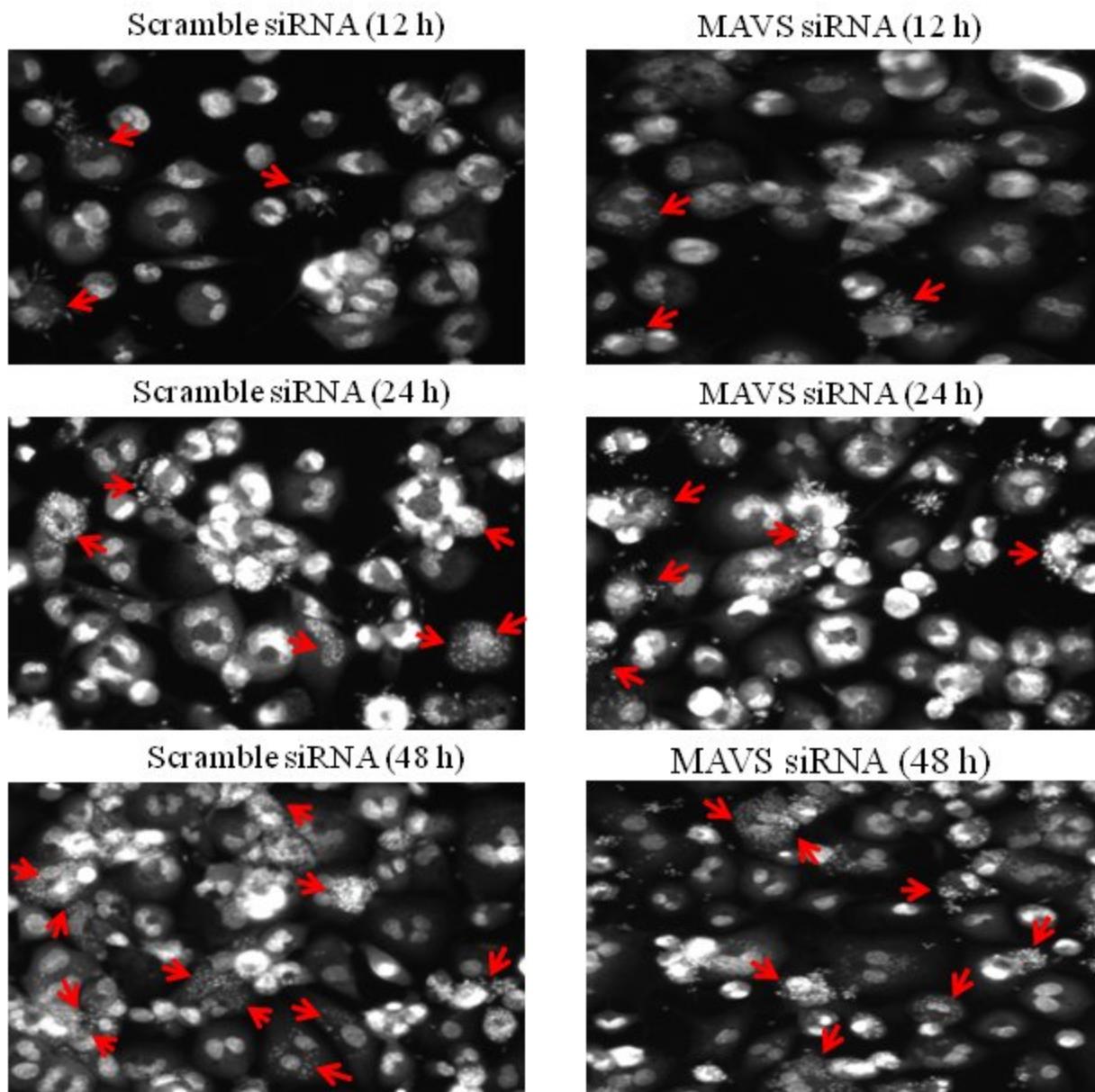


Supplementary Fig. 1: Automated microscopy based images showing effect of knockdown of hnRNP K on infection ratio and intracellular amastigotes at 12 h, 24 h and 48 h respectively.



Supplementary Fig. 2: Automated microscopy based images showing effect of knockdown of ARHGEF18 and MAVS on infection ratio and intracellular amastigotes.

Supplementary Table S1: List of iTRAQ labeling reagents used to label the digested peptides originating from different samples used in the study.

| Duration of infection | Experimental Set | Sample type | iTRAQ label used |
|------------------------------|-------------------------|---|-------------------------|
| 12 h | 1/Set A | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | 2/Set B | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | 3/Set C | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -116 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -117 |
| 24 h | 1/Set D | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | 2/Set E | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | 3/Set F | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -117 |
| 48 h | 1/Set G | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | 2/Set H | THP-1 Uninfected | -114 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -115 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -116 |
| | | THP-1 Uninfected | -115 |

| | | | |
|--|---------|---|------|
| | 3/Set I | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C1 | -116 |
| | | THP-1 + <i>L. donovani</i> (MHOM/IN/80/AG83)-C2 | -117 |

C1: Clone 1; C2: Clone 2

Supplementary Table S2: List of gene IDs, gene names, primer sequences and amplicon size in qRT-PCR based gene expression analyses

| Gene ID | Gene* | Primer Sequence 5'-3' | Amplicon Size (bp) |
|---------|------------|---------------------------|--------------------|
| 3190 | hnRNP K F | TAAAATCAAAGAACTTCGAGAGAAC | 87 |
| | hnRNP K R | AGAACAACTCTGTCAGTCCAATGA | |
| 220988 | hnRNP A3 F | TTGTGACTTATTCTTGTTGAAGAG | 77 |
| | hnRNP A3 R | CACTACACGCCCATCACACCTT | |
| 3184 | hnRNP D F | GTTTGTTGAGGTGGAATCCA | 69 |
| | hnRNP D R | AGCAGAACCCACGCCTCTTA | |
| 3309 | GRP78 F | CGGCCGCACGTGGAATG | 57 |
| | GRP78 R | TTGAACGGCAAGAACTTGATGT | |
| 7431 | VIM F | AATGACCGCTTCGCCAACT | 59 |
| | VIM R | ATCTTATTCTGCTGCTCCAGGAA | |
| 26827 | RNU6A F | CTCGCTTCGGCAGCACATATAAC | 101 |
| | RNU6A R | AATATGGAACGCTTCACGAATTG | |

*hnRNP K (Heterogeneous nuclear ribonucleoprotein K), hnRNP A3 (Heterogeneous nuclear ribonucleoprotein A3), hnRNP D (Heterogeneous nuclear ribonucleoprotein D), GRP78 (Glucose-regulated protein, 78 kDa), VIM (Vimentin), RNU6A (U6 Small RNA).

F; forward, R; reverse.

Supplementary Table S3: Gene name, accession numbers and Oligo (siRNA) sequences* used in the gene knockdown experiments

| Gene Name | Gene ID | Accession Number | siRNA Sequences |
|-----------|---------|------------------|--|
| hnRNP K | 3190 | NM_031263 | UAAAACGCCUGCAGAAGAU GGUCGUGGCUCAUUAUGGUG UGACAGAGUUGUUCUUUU GCAAGAAUUAAGGCUCU |
| MAVS | 57506 | NM_020746 | AAGUUAUACUGCCGCAAUU CAUCCAAAGUGCCUACUAG GCAAUGUGGAUGUUGUAGA CAUCCAAAUUGGCCAUCAA |
| ARHGEF18 | 23370 | NM_015318 | UCAGGGCGCUUGAAAGAU GCAGUGACCGGAAUUAUGU CACAAACGCAUAACCAAAUA GGACGCAACUCGGACCAAU |

hnRNP K (Heterogeneous nuclear ribonucleoprotein K), MAVS (Mitochondrial anti-viral signaling protein), ARHGEF18 (Rho guanine nucleotide exchange factor 18)

*Pool mixture of 4 siRNA Oligos were used in the study

Supplementary Table S5: List of differentially modulated proteins in THP-1 cells infected with *Leishmania donovani* when compared to uninfected cells at 12 h, 24 h and 48 h after *Leishmania* infection.

| N | Uniprot ID | Name | Biological Process | 12 h | | 24 h | | 48 h | | | | |
|--|------------|---|--|------------------|---|------------------|---|------------------|---|--|--|--|
| | | | | Fold (±SD) | R | Fold (±SD) | R | Fold (±SD) | R | | | |
| Transport, vesicular trafficking, signal transduction, apoptosis, cell death and differentiation, stress related, inflammation and immune response | | | | | | | | | | | | |
| Transport and vesicular trafficking | | | | | | | | | | | | |
| 1 | P00918 | Carbonic anhydrase 2 | bicarbonate transport | 0.82 (± 0.08) | 3 | 0.40 (± 0.09) | 3 | 1.03 (± 0.26) | 2 | | | |
| 2 | P02794 | Ferritin heavy chain | iron ion transport | 0.85 (±0.09) | 2 | 0.59 (±0.11) | 2 | 0.99 (±0.00) | 2 | | | |
| 3 | P22307 | Non-specific lipid-transfer protein | lipid transport | 0.85 (±0.02) | 3 | 0.58 (±0.26) | 3 | 0.99 (±0.00) | 2 | | | |
| 4 | O00299 | Chloride intracellular channel protein 1 | regulation of mitochondrial membrane potential | 0.99 (± 0) | 3 | 1.07 (± 0.14) | 3 | 0.51 (± 0.36) | 3 | | | |
| 5 | Q14974 | Importin subunit beta-1 | NLS-bearing substrate import into nucleus | 0.98 (± 0.46) | 2 | 0.99 (± 0) | 2 | 0.42 (± 0.12) | 2 | | | |
| 6 | Q13428 | Treacle protein | Transport | 2.27 (± 0.20) | 2 | 0.94 (± 0.15) | 3 | | | | | |
| 7 | P11686 | Pulmonary surfactant-associated protein C | respiratory gaseous exchange | 9.9 (± 5.87) | 2 | | | | | | | |
| 8 | Q02641 | Voltage-dependent L-type calcium channel subunit beta-1 | high voltage-gated calcium channel activity | | | 1.76 (± 0.29) | 2 | | | | | |
| 9 | Q8IWJ2 | GRIP and coiled-coil domain-containing protein 2 | late endosome to Golgi transport | | | 0.52 (± 0.02) | 2 | | | | | |
| 10 | Q12797 | Aspartyl/asparaginyl beta- | activation of store- | | | | | 0.34 | 2 | | | |

| | | hydroxylase | operated calcium channel activity | | | | | (±0.2) |
|----------------------------|--------|--|--|------------------|---|------------------|------------------|--------------------|
| Signal transduction | | | | | | | | |
| 11 | Q01518 | Adenylyl cyclase-associated protein 1 | activation of adenylate cyclase activity | 0.93 (± 0.01) | 3 | 0.44 (± 0.21) | 3 | 0.25 (± 0.01) 3 |
| 12 | P31946 | 14-3-3 protein beta/alpha | MAPK cascade | 1.23 (± 0.05) | 3 | 0.49 (± 0.34) | 3 | 0.61 (± 0.45) 2 |
| 13 | Q8TEY5 | cAMP-responsive element-binding protein 3-like protein 4 | positive regulation of transcription from RNA polymerase II promoter | 15.3 (± 1.98) | 3 | | | |
| 14 | P80303 | Nucleobindin-2 | endoplasmic reticulum-Golgi intermediate compartment | 0.99 (± 0) | 2 | | 1.96 (± 0.06) | 2 |
| 15 | P63104 | 14-3-3 protein zeta/delta | intrinsic apoptotic signaling pathway | 0.96 (± 0.09) | 3 | 1.5 (± 0.46) | 3 | 0.96 (± 0.01) 3 |
| 16 | P35613 | Basigin | cell surface receptor signaling pathway | 0.96 (±0.01) | 2 | 0.65 (±0.01) | 2 | |
| 17 | Q9Y3L3 | SH3 domain-binding protein 1 | positive regulation of GTPase activity | 1.62 (± 0.01) | 2 | | | |
| 18 | Q9ULV4 | Coronin-1C | actin cytoskeleton organization | 2.28 (± 1.03) | 2 | | 0.84 (± 0.06) | 2 |
| 19 | Q13546 | Receptor-interacting serine/threonine-protein kinase 1 | TRIF-dependent toll-like receptor signaling pathway | | | 3.06 (± 0.94) | 2 | |
| 20 | Q14160 | Protein LAP4 | activation of Rac GTPase activity | | | 2.04 (± 0.96) | 2 | |
| 21 | O95294 | RasGAP-activating-like protein 1 | negative regulation of Ras protein signal transduction | | | 0.56 (±0.14) | 2 | |

| | | | | | | | |
|---|--------|--|--|------------------|---|------------------|-----------------|
| 22 | P27348 | 14-3-3 protein theta | intrinsic apoptotic signaling pathway | 0.55 (± 0.05) | 2 | 1.0 (± 0.07) | 2 |
| 23 | O43572 | A kinase anchor protein 10, mitochondrial | termination of G-protein coupled receptor signaling pathway | 1.7 (± 0.48) | 2 | | |
| 24 | P50395 | Rab GDP dissociation inhibitor beta | regulation of small GTPase mediated signal transduction | 0.63 (± 0.04) | 3 | 0.50 (± 0.1) | 2 |
| 25 | P29350 | Tyrosine-protein phosphatase non-receptor type 6 | JAK-STAT cascade involved in growth hormone signaling pathway | | | 0.22 (±0.005) | 2 |
| 26 | P49006 | MARCKS-related protein | positive regulation of cell proliferation | 1.22 (±1.41) | 2 | 0.82 (±0.29) | 3 (±0.47) 2 |
| Apoptosis, cell death and differentiation | | | | | | | |
| 27 | P11021 | 78 kDa glucose-regulated protein | ER overload response | 0.43 (± 0.04) | 3 | 1.03 (± 0.16) | 3 (± 0.38) 3 |
| 28 | P14625 | Endoplasmic | ER-associated protein catabolic process | 0.58 (±0.10) | 3 | 1.02 (±0.02) | 3 (±0.14) 3 |
| 29 | P38646 | Stress-70 protein, mitochondrial | ER-associated protein catabolic process | 0.58 (±0.07) | 3 | 0.98 (±0.03) | 3 (±0.02) 3 |
| 30 | P04040 | Catalase | hydrogen peroxide catabolic process | 0.54 (± 0.05) | 3 | 1.05 (± 0.03) | 3 (± 0.01) 3 |
| 31 | P61604 | 10 kDa heat shock protein, mitochondrial | activation of cysteine-type endopeptidase activity involved in apoptotic process | 0.59 (± 0.05) | 3 | 0.84 (± 0.12) | 3 (± 0.88) 3 |
| 31 | P08107 | Heat shock 70 kDa protein 1 | negative regulation of apoptotic process | 1.04 (±0.02) | 3 | 1.07 (±0.10) | 3 (±0.09) 3 |

| | | | | | | | | | |
|---|--------|---|---|------------------|---|------------------|---|------------------|---|
| 33 | P06748 | Nucleophosmin | CENP-A containing nucleosome assembly at centromere | 1.53 (± 0.31) | 3 | 1.09 (± 0.03) | 3 | 1.93 (± 0.16) | 3 |
| 34 | P00441 | Superoxide dismutase [Cu-Zn] | hydrogen peroxide biosynthetic process | 0.99 (±0.00) | 3 | 0.88 (±0.13) | 3 | 0.7 (±0.01)* | 2 |
| 35 | P04179 | Superoxide dismutase [Mn], mitochondrial | hydrogen peroxide biosynthetic process | 0.97 (± 0.07) | 3 | 0.57 (± 0.13) | 3 | 2.01 (± 0.22) | 3 |
| 36 | Q9Y2B0 | Protein canopy homolog 2 | negative regulation of gene expression | 0.99 (±0.00) | 2 | 0.60 (±0.01) | 2 | | |
| 37 | P08670 | Vimentin | cellular component disassembly involved in execution phase of apoptosis | 0.58 (± 0.16) | 3 | 1.74 (± 0.55) | 3 | 2.19 (± 0.10) | 3 |
| 38 | P17096 | High mobility group protein HMG-I/HMG-Y | DNA unwinding involved in replication | 1.56 (± 0.07) | 3 | 3.54 (± 0.1) | 3 | 5.74 (± 0.34) | 3 |
| 39 | Q6ZSZ5 | Rho guanine nucleotide exchange factor 18 | apoptotic signaling pathway | 3.6 (± 0.93) | 2 | | | | |
| 40 | P52926 | High mobility group protein HMGI-C | DNA damage response | 1.76 (± 0.46) | 2 | 3.32 (± 0.16) | 3 | 9.58 (± 0.12) | 3 |
| 41 | P08758 | Annexin A5 | negative regulation of apoptotic process | | | 0.34 (± 0.13) | 3 | 0.35 (± 0.12) | 2 |
| 42 | P14222 | Perforin-1 | apoptotic process | | | 1.75 (± 0.7) | 2 | | |
| 43 | Q9UKY | Protein CDV3 homolog | Cell proliferation | | | 1.57 (± 0.62) | 2 | 1 (± 0.05) | 2 |
| Stress related proteins, inflammation and immune response | | | | | | | | | |
| Cell redox homeostasis | | | | | | | | | |
| 44 | P07237 | Protein disulfide-isomerase | cell redox homeostasis | 0.46 (± 0.04) | 3 | 1.31 (± 0.31) | 3 | 3.98 (± 2.37) | 3 |

| | | | | | | | | | |
|----------------------------------|--------|---|--|-------------------|---|-------------------|---|------------------|---|
| 45 | P30101 | Protein disulfide-isomerase A3 | cell redox homeostasis | 0.8 (± 0.05) | 3 | 2.43 (± 0.9) | 3 | 1.06 (± 0.08) | 3 |
| 46 | Q15084 | Protein disulfide-isomerase A6 | activation of signaling protein activity involved in unfolded protein response | 0.51 (± 0.05) | 3 | 1.03 (± 0.01) | 3 | 1.01 (± 0.24) | 2 |
| 47 | P13667 | Protein disulfide-isomerase A4 | cell redox homeostasis | 0.52 (± 0.14) | 3 | 1.0 (± 0.03) | 3 | 1.15 (± 0.05) | 3 |
| 48 | Q8NBS9 | Thioredoxin domain-containing protein 5 | cell redox homeostasis | 0.99 (± 0) | 2 | 0.4 (± 0.02) | 2 | | |
| 49 | Q9BS26 | Thioredoxin domain-containing protein 4 | cell redox homeostasis | 0.82 (± 0.12) | 2 | 0.57 (± 0.007) | 2 | | |
| 50 | O95881 | Thioredoxin domain-containing protein 12 | cell redox homeostasis | 0.99 (± 0) | 2 | 0.29 (± 0.01) | 2 | | |
| 51 | Q9H299 | SH3 domain-binding glutamic acid-rich-like protein 3 | cell redox homeostasis | | | 1.07 (± 0.09) | 2 | 0.65 (± 0.00) | 2 |
| Oxidative stress response | | | | | | | | | |
| 52 | P09211 | Glutathione S-transferase P | glutathione metabolic process | | | 1.46 (± 0.5) | 3 | 0.62 (± 0.02) | 2 |
| 53 | Q9Y4L1 | Hypoxia up-regulated protein 1 | activation of signaling protein activity involved in unfolded protein response | 0.62 (± 0.02) | 3 | 1.26 (± 0.18) | 3 | 0.96 (± 0.09) | 3 |
| 54 | P30048 | Thioredoxin-dependent peroxide reductase, mitochondrial | hydrogen peroxide catabolic process | 0.68 (± 0.06)* | 3 | 1.01 (± 0.04) | 3 | 0.87 (± 0.2) | 3 |
| Immune response | | | | | | | | | |
| 55 | Q7Z434 | Mitochondrial antiviral-signaling protein | activation of innate immune response | 7.86 (± 3.55) | 2 | | | | |

| | | | | | | | | |
|---|--------|---------------------------------|---|------------------|---|-------------------|------------------|------------------|
| 56 | P01584 | Interleukin-1 beta | cytokine-mediated signaling pathway | 0.75 (± 0.45) | 2 | 0.55 (± 0.03) | 2 | |
| 57 | P09960 | Leukotriene A-4 hydrolase | arachidonic acid metabolic process | | | 1.72 (± 0.46) | 2 | |
| 58 | Q13740 | CD166 antigen | cell adhesion | | | | 1.71 (± 0.12) | 2 |
| 59 | P36222 | Chitinase-3-like protein 1 | activation of NF-kappaB-inducing kinase activity | | | 0.53 (± 0) | 2 | 0.97 (± 0.04) |
| DNA metabolism (DNA repair, replication and chromatin remodeling) | | | | | | | | |
| Nucleobase, nucleoside and nucleotide metabolism | | | | | | | | |
| 60 | Q13232 | Nucleoside diphosphate kinase 3 | CTP biosynthetic process | 2.59 (± 0.08) | 2 | | | |
| 61 | P15531 | Nucleoside diphosphate kinase A | CTP biosynthetic process | | | 0.41 (± 0.005) | 2 | 0.94 (± 0.03) |
| 62 | P19971 | Thymidine phosphorylase | pyrimidine nucleobase metabolic process | | | 1.11 (± 0.68) | 2 | 0.54 (± 0.12) |
| Histones and chromatin remodeling | | | | | | | | |
| 63 | P62805 | Histone H4 | CENP-A containing nucleosome assembly at centromere | 1.62 (± 0.28) | 3 | 5.51 (± 2.94) | 3 | 13.6 (± 3.23) |
| 64 | Q99880 | Histone H2B type 1-L | nucleosome assembly | 1.62 (± 0.3) | 2 | 0.94 (± 0.07) | 3 | 19.5 (± 7.56) |
| 65 | P19338 | Nucleolin | Transcription regulation | 1.46 (± 0.43) | 3 | 3.23 (± 2.3) | 3 | 1 (± 0.02) |
| 66 | Q92522 | Histone H1x | nucleosome assembly | 0.99 (± 0) | 2 | 2.07 (± 0.48) | 2 | 0.9 (± 0.54) |
| 67 | Q9BTM1 | Histone H2A.J | nucleosome assembly | 0.93 (± 0.07) | 2 | | 6.53 (± 3.18) | 2 |

| | | | | | | | |
|----|--------|---|-------------------------|------------------|---|-------------------|----------------------|
| 68 | Q93079 | Histone H2B type 1-H | nucleosome assembly | 2.89 (± 2.49) | 2 | | |
| 69 | Q99878 | Histone H2A type 1-J | nucleosome assembly | 1.23 (± 1.46) | 2 | 4.52 (± 4.33) | 2 |
| 70 | Q99879 | Histone H2B type 1-M | nucleosome assembly | | | 14.5 (± 13.0) | 2 |
| 71 | P84243 | Histone H3.3 | nucleosome assembly | | | 1.87 (± 1.32) | 3 |
| 72 | Q01105 | Protein SET | DNA replication | | | 1.96 (± 0.06) | 2 |
| 73 | O75367 | Core histone macro-H2A.1 | nucleosome assembly | | | 2.44 (± 1.53) | 2 6.07 (± 2.74) 2 |
| 74 | P05204 | Non-histone chromosomal protein HMG-17 | chromatin organization | | | 3.6 (± 0.02) | 2 |
| 75 | Q5SSJ5 | Heterochromatin protein 1-binding protein 3 | nucleosome assembly | | | 1.68 (± 0.24) | 2 |
| 76 | Q96L91 | E1A-binding protein p400 | histone H2A acetylation | | | 1.46 (± 0.34) | 2 |
| 77 | P04908 | Histone H2A type 1-B/E | nucleosome assembly | | | 1.95 (± 0.92) | 2 |
| 78 | P16104 | Histone H2A.x | nucleosome assembly | | | 4.23 (± 3.34) | 2 |
| 79 | Q71DI3 | Histone H3.2 | nucleosome assembly | | | 3.45 (± 1.76) | 2 |
| 80 | Q6FI13 | Histone H2A type 2-A | nucleosome assembly | | | 4 (± 2.24) | 2 |
| 81 | O60814 | Histone H2B type 1-K | nucleosome assembly | | | 20.18 (± 6.33) | 2 |

| | | | | | | | | |
|--|--------|--|---|-------------------|---|-------------------|---|-------------------|
| DNA repair and replication | | | | | | | | |
| 82 | P13010 | ATP-dependent DNA helicase 2 subunit 2 | DNA recombination | 0.89 (± 0.1) | 3 | 3.16 (± 0.61) | 2 | 0.91 (± 0.02) |
| 83 | Q04837 | Single-stranded DNA-binding protein, mitochondrial | DNA replication | | | 0.61 (±0.02) | 2 | |
| 84 | P11387 | DNA topoisomerase 1 | DNA replication | 1.02 (± 0.07) | 2 | 1.72 (± 0.25) | 3 | |
| 85 | Q15233 | Non-POU domain-containing octamer-binding protein | DNA recombination | 1.17 (± 0.17) | 2 | 1.72 (± 0.88) | 3 | |
| 86 | Q9Y230 | RuvB-like 2 | DNA recombination | | | 1.45 (± 0.28)* | 2 | |
| RNA metabolism (RNA splicing and transcription regulation) | | | | | | | | |
| RNA splicing and processing | | | | | | | | |
| 87 | P22626 | Heterogeneous nuclear ribonucleoproteins A2/B1 | RNA transport and mRNA splicing via spliceosome | 0.89 (± 0.04) | 3 | 2.96 (± 0.49) | 3 | 1.0 (±0.029) |
| 88 | P31943 | Heterogeneous nuclear ribonucleoprotein H | mRNA splicing via spliceosome | 0.98 (± 0.24) | 2 | 2 (± 0.54) | 3 | 0.99 (± 0.108) |
| 89 | Q14103 | Heterogeneous nuclear ribonucleoprotein D0 | mRNA splicing via spliceosome | 0.71 (± 0.08) | 3 | 3.07 (± 1.64) | 3 | 1.08 (±0.09) |
| 90 | P09651 | Heterogeneous nuclear ribonucleoprotein A1 | RNA export from nucleus and mRNA splicing via spliceosome | 1.17 (± 0.26) | 3 | 2.57 (± 0.25) | 2 | |
| 91 | P61978 | Heterogeneous nuclear ribonucleoprotein K | mRNA splicing via spliceosome | 0.46 (± 0.23) | 3 | 2.64 (± 0.34) | 3 | 0.88 (± 0.28) |
| 92 | Q08211 | ATP-dependent RNA helicase A | CRD-mediated mRNA stabilization | 1.05 (± 0.42) | 2 | 1.27 (± 0.27) | 3 | 1.76 (± 0.92) |
| 93 | P07910 | Heterogeneous nuclear ribonucleoproteins C1/C2 | mRNA splicing via spliceosome | 1.13 (± 0.10) | 3 | 2.28 (± 1.04) | 3 | 1.37 ± (0.24) |

| | | | | | | | | | |
|---|--------|--|---|------------------|---|-------------------|---|-------------------|---|
| 94 | P51991 | Heterogeneous nuclear ribonucleoprotein A3 | mRNA splicing via spliceosome | 0.69 (± 0.13) | 2 | 2.79 (± 1.16) | 3 | 1.16 ± (0.15) | 3 |
| 95 | O43390 | Heterogeneous nuclear ribonucleoprotein R | mRNA splicing via spliceosome | 0.99 (± 0) | 2 | 1.5 (± 0.009) | 2 | | |
| 96 | P0C7M2 | Putative heterogeneous nuclear ribonucleoprotein A1-like protein 3 | mRNA splicing via spliceosome | 0.53 (± 0.04) | 2 | 0.79 (± 0.507) | 2 | 0.4 (± 0.29) | 2 |
| 97 | Q9BQA1 | Methylosome protein 50 | ncRNA metabolic process | 0.6 (±0.05) | 2 | | | | |
| 98 | P38159 | Heterogeneous nuclear ribonucleoprotein G | mRNA splicing via spliceosome | | | 10.6 (± 8.14) | 3 | 1.1 (± 0.46) | 2 |
| 99 | Q92841 | Probable ATP-dependent RNA helicase DDX17 | RNA processing | | | 1.46 (± 0.009) | 2 | | |
| 100 | O43290 | U4/U6.U5 tri-snRNP-associated protein 1 | RNA processing | | | 1.81 (± 0.59) | 2 | | |
| 101 | P35637 | RNA-binding protein FUS | mRNA splicing via spliceosome | | | 2.57 (± 0.15) | 2 | 1.13 (± 0.007) | 2 |
| 102 | P62314 | Small nuclear ribonucleoprotein Sm D1 | ncRNA metabolic process | | | 1.79 (± 0.33) | 2 | | |
| 103 | Q9Y333 | U6 snRNA-associated Sm-like protein LSm2 | exonucleolytic nuclear-transcribed mRNA catabolic process involved in deadenylation-dependent decay | | | 0.56 (±0.04) | 2 | | |
| 104 | P52597 | Heterogeneous nuclear ribonucleoprotein F | mRNA splicing via spliceosome | 0.72 (±0.28) | 2 | 1.09 (±0.21) | 3 | 0.62 (±0.03) | 2 |
| Transcription and cell cycle regulation | | | | | | | | | |
| 105 | P53999 | Activated RNA polymerase II | regulation of | 0.95 | 2 | 2.59 | 3 | 1.39 | 2 |

| | | | transcriptional coactivator p15 | transcription from RNA polymerase II promoter | (± 0.03) | (± 1.52) | | (± 0.48) | |
|-----|--------|--|--|---|----------|------------------|------------------|-------------------|---|
| 106 | P80723 | Brain acid soluble protein 1 | negative regulation of transcription | 0.64 (± 0.15) | 3 | 5.59 (± 2.63) | 3 | 0.95 (± 0.05) | 3 |
| 107 | Q9UIW0 | Ventral anterior homeobox 2 | negative regulation of transcription from RNA polymerase II promoter | 2.12 (± 0.54) | 2 | | | | |
| 108 | P06454 | Prothymosin alpha | transcription, DNA-dependent | 1.55 (± 0.3) | 2 | 1.15 (± 0.04) | 2 | 1.05 (± 0.25) | 2 |
| 109 | P14652 | Homeobox protein Hox-B2 | transcription, DNA-dependent | 3.01 (± 0.68) | 2 | | | | |
| 110 | P09874 | Poly [ADP-ribose] polymerase 1 | DNA damage response | | | 1.58 (± 0.33) | 2 | | |
| 111 | Q96AE4 | Far upstream element-binding protein 1 | positive regulation of gene expression | | | 1.94 (± 0.25) | 2 | 1.01 (± 0.006) | 2 |
| 112 | Q7Z7A1 | Centriolin | G2/M transition of mitotic cell cycle | | | 2.24 (± 0.02) | 2 | | |
| 113 | Q14814 | Myocyte-specific enhancer factor 2D | positive regulation of transcription from RNA polymerase II promoter | | | | 1.72 (± 0.02) | 2 | |

Protein metabolism (protein folding, modification and synthesis)

Protein folding

| | | | | | | | | | |
|-----|--------|--|--|------------------|---|------------------|---|------------------|---|
| 114 | P10809 | 60 kDa heat shock protein, mitochondrial | 'de novo' protein folding | 0.53 (± 0.08) | 3 | 0.67 (± 0.03) | 3 | 1.54 (± 0.45) | 3 |
| 115 | P27797 | Calreticulin | activation of signaling protein activity involved in unfolded protein response | 0.42 (± 0.06) | 3 | 0.93 (± 0.09) | 3 | 0.57 (± 0.29) | 3 |

| | | | | | | | | | |
|--------------------------------------|--------|---|---|------------------|---|-------------------|---|------------------|---|
| 116 | P23284 | Peptidyl-prolyl cis-trans isomerase B | protein folding | 0.96 (± 0.06) | 3 | 0.55 (± 0.14) | 3 | 1.01 (± 0.09) | 3 |
| 117 | P27824 | Calnexin | antigen processing and presentation of exogenous peptide antigen via MHC class II | 0.43 (± 0.13) | 3 | 1.05 (± 0.25) | 2 | | |
| 118 | P50454 | Serpин H1 | response to unfolded protein | 1.07 (±0.16) | 3 | 0.56 (±0.26) | 3 | 1.28 (±0.26) | 3 |
| Protein modification and proteolysis | | | | | | | | | |
| 119 | P22314 | Ubiquitin-like modifier-activating enzyme 1 | cell death | 0.96 (± 0.18) | 2 | 0.43 (± 0.08) | 3 | 0.55 (± 0.36) | 3 |
| 120 | Q14697 | Neutral alpha-glucosidase AB | post-translational protein modification | 0.56 (±0.08) | 3 | 1.02 (±0.03) | 3 | 1.36 (±0.09) | 3 |
| 121 | P62988 | Ubiquitin | Protein turnover | 0.69 (±0.09) | 3 | 1.43 (±0.19) | 3 | 0.78 (±0.12) | 3 |
| 122 | O60888 | Protein CutA | protein localization | 1.14 (± 0.86) | 2 | 1.97 (± 1.72) | 2 | | |
| 123 | O75439 | Mitochondrial-processing peptidase subunit beta | cellular protein metabolic process | | | | | 1.82 (± 0.09) | 2 |
| 124 | P49903 | Selenide, water dikinase 1 | cellular protein modification process | | | | | 0.51 (± 0.17) | 2 |
| Protein synthesis and targeting | | | | | | | | | |
| 125 | P05387 | 60S acidic ribosomal protein P2 | SRP-dependent cotranslational protein targeting to membrane | 1.12 (± 0.23) | 3 | 1.75 (± 2.03) | 2 | 5.37 (± 0.45) | 2 |
| 126 | P68104 | Elongation factor 1-alpha 1 | GTP catabolic process | 2.29 (± 0.98) | 2 | 1.55 (± 0.54) | 3 | | |
| 127 | P30040 | Endoplasmic reticulum protein | intracellular protein | 0.94 | 3 | 0.23 | 2 | 1.49 | 2 |

| ERp29 | | | transport | (± 0.15) | (± 0.08) | (± 0.16) | |
|---------------------------|--------|---|---|------------------|------------------|------------------|-------------------|
| 128 | P05386 | 60S acidic ribosomal protein P1 | SRP-dependent cotranslational protein targeting to membrane | 1.66 (± 0.82) | 3 (± 0.07) | 2 (± 0.25) | 0.98 (± 0.25) |
| 129 | Q05639 | Elongation factor 1-alpha 2 | GTP catabolic process | 2.27 (± 0.11) | 2 | | |
| 130 | Q5VTE0 | Putative elongation factor 1-alpha-like 3 | GTP catabolic process | 0.91 (± 0.04) | 2 (± 0.48) | 2 (± 0.01) | 0.98 (± 0.01) |
| 131 | P23396 | 40S ribosomal protein S3 | SRP-dependent cotranslational protein targeting to membrane | 2.33 (± 0.31) | 2 (± 5.3) | 2 (± 0.007) | 0.12 (± 0.007) |
| 132 | P62913 | 60S ribosomal protein L11 | SRP-dependent cotranslational protein targeting to membrane | | 1.62 (± 0.02) | 2 | |
| 133 | Q02878 | 60S ribosomal protein L6 | SRP-dependent cotranslational protein targeting to membrane | | 1.9 (± 0.34) | 2 | |
| 134 | P39019 | 40S ribosomal protein S19 | SRP-dependent cotranslational protein targeting to membrane | | 0.62 (± 0.15) | 2 | |
| Metabolic pathways | | | | | | | |
| Carbohydrate metabolism | | | | | | | |
| Glycolysis | | | | | | | |
| 135 | P06733 | Alpha-enolase | glycolysis | 0.63 (± 0.08) | 3 (± 0.26) | 3 (± 0.05) | 3 |
| 136 | P14618 | Pyruvate kinase isozymes M1/M2 | glycolysis | 0.7 (± 0.02) | 3 (± 0.27) | 0.54 (± 0.21) | 3 |
| 137 | P04075 | Fructose-bisphosphate aldolase A | glycolysis | 0.74 (± 0.03) | 3 (± 0.21) | 0.5 (± 0.03) | 3 |

| | | | | | | | | | |
|--|--------|---|-----------------------------------|------------------|---|-------------------|---|-------------------|---|
| 138 | P04406 | Glyceraldehyde-3-phosphate dehydrogenase | glycolysis | 0.96 (± 0.02) | 3 | 1.66 (± 0.37) | 3 | 0.96 (± 0.04) | 3 |
| 139 | P00558 | Phosphoglycerate kinase 1 | gluconeogenesis | 1 (± 0.04) | 3 | 1.01 (± 0.3) | 3 | 0.42 (± 0.12) | 3 |
| 140 | P60174 | Triosephosphate isomerase | gluconeogenesis | 0.76 (± 0.02) | 3 | 1.5 (± 0.09) | 3 | 0.96 (± 0.005) | 3 |
| 141 | P18669 | Phosphoglycerate mutase 1 | gluconeogenesis | 0.9 (± 0.01) | 2 | 0.23 (± 0.16) | 2 | | |
| 142 | P15259 | Phosphoglycerate mutase 2 | glycolysis | | | | | 0.68 (± 0.13) | 2 |
| TCA cycle and electron transport chain | | | | | | | | | |
| 143 | P40926 | Malate dehydrogenase, mitochondrial | NADH metabolic process | 0.51 (± 0.06) | 3 | 0.97 (± 0.04) | 3 | 1.7 (± 0.15) | 3 |
| 144 | O75390 | Citrate synthase, mitochondrial | tricarboxylic acid cycle | | | 0.62 (± 0.31) | 3 | 1.02 (± 0.06) | 2 |
| 145 | P07954 | Fumarate hydratase, mitochondrial | tricarboxylic acid cycle | 0.99 (± 0) | 2 | 1.77 (± 0.104) | 2 | 1.32 (± 0.04) | 2 |
| Beta oxidation of fatty acid and fatty acid metabolism | | | | | | | | | |
| 146 | Q16698 | 2,4-dienoyl-CoA reductase, mitochondrial | fatty acid beta-oxidation | 2.06 (± 0.98) | 3 | 1.13 (± 0.02) | 2 | 1.26 (± 0.46) | 2 |
| 147 | Q6JQN1 | Acyl-CoA dehydrogenase family member 10 | acyl-CoA dehydrogenase activity | 7 (± 2.93) | 2 | | | | |
| 148 | P40939 | Trifunctional enzyme subunit alpha, mitochondrial | cardiolipin acyl-chain remodeling | | | 1.56 (± 0.54) | 3 | 0.99 (± 0) | 2 |
| Pentose phosphate shunt | | | | | | | | | |
| 149 | P29401 | Transketolase | pentose-phosphate shunt | 0.86 (± 0.09) | 3 | 1.03 (± 0.03) | 3 | 0.52 (± 0.39) | 3 |
| 150 | P37837 | Transaldolase | xylulose biosynthetic process | 0.89 (± 0.13) | 2 | 1.2 (± 0.05) | 3 | | |

| Energy metabolism | | | | | | | | |
|--------------------------|--------|---|---|-------------------|---|-------------------|---|------------------|
| 151 | P06576 | ATP synthase subunit beta, mitochondrial | ATP hydrolysis coupled proton transport | 0.47 (± 0.12) | 3 | 1.24 (± 0.11) | 3 | 3.1 (± 0.89) |
| 152 | P25705 | ATP synthase subunit alpha, mitochondrial | ATP hydrolysis coupled proton transport | 1.02 (±0.02) | 3 | 0.58 (±0.20) | 3 | 0.83 (±0.03) |
| 153 | P13804 | Electron transfer flavoprotein subunit alpha, mitochondrial | respiratory electron transport chain | 0.66 (±0.08) | 3 | 1.04 (±0.05) | 3 | 0.75 (±0.07) |
| 154 | P22695 | Cytochrome b-c1 complex subunit 2, mitochondrial | oxidative phosphorylation | 1.31 (± 0.69) | 2 | 1.71 (± 0.01) | 2 | |
| Other metabolic pathways | | | | | | | | |
| 155 | P23141 | Liver carboxylesterase 1 | response to toxic substance | 0.49 (± 0.08) | 3 | 1.45 (± 0.81) | 3 | 1 (± 0.02) |
| 156 | P23368 | NAD-dependent malic enzyme, mitochondrial | malate metabolic process | 1.02 (± 0.05) | 2 | 1.9 (± 0.69) | 2 | |
| 157 | P07686 | Beta-hexosaminidase subunit beta | carbohydrate metabolic process | | | 0.64 (±0.06) | 2 | |
| 158 | P22570 | NADPH:adrenodoxin oxidoreductase, mitochondrial | NADPH oxidation | 3.28 (± 0.25) | 2 | | | |
| 159 | Q9BZ23 | Pantothenate kinase 2, mitochondrial | coenzyme A biosynthetic process | | | 0.54 (± 0.03) | 2 | |
| 160 | Q32M88 | Acid trehalase-like protein 1 | carbohydrate metabolic process | | | 0.62 (±0.15) | 2 | |
| Cytoskeleton | | | | | | | | |
| 161 | Q13748 | Tubulin alpha-3C/D chain | microtubule-based process | 6.43 (± 2.13) | 2 | 0.65 (± 0.37) | | |
| 162 | P07737 | Profilin-1 | actin cytoskeleton organization | 0.85 (± 0.05) | 3 | 1.03 (± 0.09) | 3 | 0.51 (± 0.16) |
| 163 | P26038 | Moesin | leukocyte cell-cell | 0.62 | 3 | 0.37 | 3 | 0.64 |

| | | | adhesion | (± 0.05) | | (± 0.09) | | (± 0.14) |
|-----|--------|---|---|------------------|---|------------------|------------------|-------------------|
| 164 | P13796 | Plastin-2 | T cell activation involved in immune response | 1.53 (± 0.35) | 3 | 0.73 (± 0.14) | 3 | 0.51 (± 0.11) |
| 165 | Q9Y490 | Talin-1 | activation of signaling protein activity involved in unfolded protein response | 0.99 (± 0) | 2 | 0.92 (± 0.02) | 3 | 0.5 (± 0.39) |
| 166 | P40121 | Macrophage-capping protein | barbed-end actin filament capping | | | 0.53 (± 0.18) | 3 | 0.99 (± 0.005) |
| 167 | P68371 | Tubulin beta-2C chain | microtubule-based process | 4.59 (± 1.69) | 3 | 3.54 (± 0.36) | 2 | |
| 168 | P42167 | Lamina-associated polypeptide 2, isoforms beta/gamma | nuclear envelope | 0.55 (± 0.39) | 2 | | | |
| 169 | P60709 | Actin, cytoplasmic 1 | 'de novo' posttranslational protein folding | 0.96 (± 0.03) | 2 | | 0.28 (± 0.17) | 2 |
| 170 | Q9BQE3 | Tubulin alpha-1C chain | cytoskeleton-dependent intracellular transport | 5.6 (± 4.12) | 3 | 1.25 (± 0.01) | 2 | |
| 171 | Q5TZA2 | Rootletin | centrosome organization | 4.5 (± 1.32) | 2 | | | |
| 172 | P02545 | Lamin-A/C | M phase of mitotic cell cycle | 1.03 (± 0.08) | 3 | 2.39 (± 0.32) | 2 | 2.47 (± 1.35) |
| 173 | Q8N3T6 | Transmembrane protein 132C | integral to membrane | 1.84 (± 0.08) | 2 | | | |
| 174 | P12109 | Collagen alpha-1(VI) chain | cell adhesion | 5.87 (± 1.29) | 2 | | | |
| 175 | P27816 | Microtubule-associated protein 4 | cell division and establishment of spindle | 0.77 (± 0.24) | 2 | | 3.92 (± 0.73) | 2 |

| orientation | | | | | | | |
|-------------|--------|--|---|------------------|------------------|-------------------|----------------|
| | | | | | | | |
| 176 | P04264 | Keratin, type II cytoskeletal 1 | complement activation | 0.1 (± 0.01) | 2 | 2.7 (± 1.48) | 3 |
| 177 | P06753 | Tropomyosin alpha-3 chain | muscle filament sliding | 0.36 (± 0.34) | 3 | | |
| 178 | P35908 | Keratin, type II cytoskeletal 2 epidermal | keratinization | 0.29 (± 0.34) | 2 | 1.91 (± 0.38) | 2 |
| 179 | Q9Y4G6 | Talin-2 | cytoskeletal anchoring at plasma membrane | 2.0 (± 0.59) | 2 | | |
| 180 | Q2KHT4 | Germ cell-specific gene 1 protein | integral to membrane | 2.08 (± 0.40) | 2 | | |
| 181 | Q14019 | Coactosin-like protein | defense response to fungus | 0.99 (± 0) | 2 | 0.52 (± 0.006) | 2 |
| 182 | P23528 | Cofilin-1 | Rho protein signal transduction | 0.85 (± 0.26) | 2 | 0.52 (± 0.006) | 2 |
| 183 | O43312 | Metastasis suppressor protein 1 | actin cytoskeleton organization | 3.61 (± 1.53) | 2 | | |
| 184 | P35527 | Keratin, type I cytoskeletal 9 | intermediate filament organization | 0.91 (± 0.14) | 2 | 3.29 (± 2.0) | 3 |
| 185 | P13645 | Keratin, type I cytoskeletal 10 | cellular response to calcium ion | | 4 | 2 (± 0.39) | |
| 186 | P04350 | Tubulin beta-4 chain | microtubule-based process | | 0.55 (± 0.03) | 2 | |
| 187 | P68363 | Tubulin alpha-1B chain | cytoskeleton-dependent intracellular transport | | 0.55 (± 0.08) | 2 | |
| 188 | P05107 | Integrin beta-2 | cell-cell signaling | 0.99 (± 0.00) | 2 | 1.03 (± 0.03) | 2 (± 0.06) |
| 189 | P07437 | Tubulin beta chain | cellular component | 0.85 | 2 | 0.9 | 3 0.63 3 |

| | | | | movement | (±0.16) | (±0.24) | (±0.33) | |
|--------------------------------|--------|--|--|--|------------------|------------------|--------------|-----------|
| 190 | P12814 | Alpha-actinin-1 | | actin crosslink formation | | 1.37 (±0.26) | 3 (±0.02) | 0.66 3 |
| 191 | P63261 | Actin, cytoplasmic 2 | | Fc-gamma receptor signaling pathway involved in phagocytosis | 0.84 (±0.13) | 3 (±0.08) | 3 (±0.16) | 0.67 3 |
| 192 | P06396 | Gelsolin | | actin filament polymerization | 0.84 (±0.13) | 3 (±0.01) | 3 (±0.21) | 0.67 3 |
| Proteins with unknown function | | | | | | | | |
| 193 | Q5JR59 | Uncharacterized protein KIAA0774 | | | 1.54 (± 0.18) | 2 | | |
| 194 | Q5TEA3 | Uncharacterized protein C20orf194 | | | | 0.4 (± 0.01) | 2 | |
| 195 | Q5RHP9 | Uncharacterized protein C1orf173 | | | | 2.17 (± 0.89) | 2 | |
| 196 | Q12767 | Uncharacterized protein KIAA0195 | | | | 0.5 (± 0.009) | 2 | |
| 197 | Q8WVS4 | WD repeat-containing protein 60 | | | | 3.1 (± 0.504) | 2 | |
| 198 | Q8NA72 | Uncharacterized protein C5orf37 | | | 14.3 (± 6.96) | 2 | | |
| 199 | Q9H2F9 | Coiled-coil domain-containing protein 68 | | | 11.2 (±1.31) | 2 | | |

The parameters that were used for identification and quantification of differentially modulated proteins included: (1) proteins identified having 95% confidence (Unused-Prot Score > 1.3); (2) proteins with fold differences 1.5 or 0.67 were considered more abundant and less abundant respectively and (3) protein detected in a minimum of two technical replicates.

R: no. of replicate experiment. Fold represents fold abundance (higher/lower) in infected *versus* uninfected THP-1 cells. *nearest fold ratio for threshold cut off.