

Table S5. BALF proteome of ALI patients with and without VAP. Differentially enriched proteins in VAP(+) patients are highlighted in red and those more abundant in VAP(–) subjects are in blue. Significance was based on Spectral Index (SI) analysis (absolute value cutoff ≥ 0.417).

| Protein IPI | Entrez Gene ID | Gene Symbol | Description | SI |
|-------------|----------------|---------------------|---|-------|
| IPI00027769 | 1991 | ELA2 | elastase 2, neutrophil | 0.698 |
| IPI00332371 | 5211 | PFKL | phosphofructokinase, liver | 0.692 |
| IPI00022975 | 241 | ALOX5AP | arachidonate 5-lipoxygenase-activating protein | 0.662 |
| IPI00020984 | 821 | CANX | calnexin | 0.649 |
| IPI00003817 | 397 | ARHGDI _B | Rho GDP dissociation inhibitor (GDI) beta | 0.648 |
| IPI00007244 | 4353 | MPO | myeloperoxidase | 0.627 |
| IPI00552280 | 671 | BPI | bactericidal/permeability-increasing protein | 0.625 |
| IPI00218433 | 1535 | CYBA | cytochrome b-245, alpha polypeptide | 0.613 |
| IPI00217987 | 3684 | ITGAM | integrin, alpha M (complement component 3 receptor 3 subunit) | 0.604 |
| IPI00009856 | 51297 | PLUNC | palate, lung and nasal epithelium associated | 0.604 |
| IPI00027509 | 4318 | MMP9 | matrix metalloproteinase 9 | 0.595 |
| IPI00218916 | 240 | ALOX5 | arachidonate 5-lipoxygenase | 0.586 |
| IPI00103356 | 3689 | ITGB2 | integrin, beta 2 (complement component 3 receptor 3 and 4 subunit) | 0.584 |
| IPI00025252 | 2923 | PDIA3 | protein disulfide isomerase family A, member 3 | 0.580 |
| IPI00654777 | 8665 | EIF3F | eukaryotic translation initiation factor 3, subunit F | 0.578 |
| IPI00007047 | 6279 | S100A8 | S100 calcium binding protein A8 | 0.575 |
| IPI00020210 | 8291 | DYSF | dystrofins, limb girdle muscular dystrophy 2B (autosomal recessive) | 0.571 |
| IPI00021926 | 5706 | PSMC6 | proteasome (prosome, macropain) 26S subunit, ATPase, 6 | 0.571 |
| IPI00102685 | 91663 | MYADM | myeloid-associated differentiation marker | 0.571 |
| IPI00298860 | 4057 | LTF | lactotransferrin | 0.568 |
| IPI00292532 | 820 | CAMP | cathelicidin antimicrobial peptide | 0.568 |
| IPI00000875 | 1937 | EEF1G | eukaryotic translation elongation factor 1 gamma | 0.554 |
| IPI00221091 | 6210 | RPS15A | ribosomal protein S15a | 0.550 |
| IPI00216691 | 5216 | PFN1 | profilin 1 | 0.546 |
| IPI00030872 | 8875 | VNN2 | vanin 2 | 0.543 |
| IPI00003269 | 345651 | ACTBL2 | actin, beta-like 2 | 0.542 |
| IPI00027462 | 6280 | S100A9 | S100 calcium binding protein A9 | 0.540 |
| IPI00783313 | 5836 | PYGL | phosphorylase, glycogen | 0.539 |
| IPI00003909 | 6515 | SLC2A3 | solute carrier family 2 (facilitated glucose transporter), member 3 | 0.533 |
| IPI00004524 | 25801 | GCA | grancalcin, EF-hand calcium binding protein | 0.530 |
| IPI00027423 | 5499 | PPP1CA | protein phosphatase 1, catalytic subunit, alpha isoform | 0.526 |
| IPI00011454 | 23193 | GANAB | glucosidase, alpha; neutral AB | 0.524 |
| IPI00295851 | 1315 | COPB1 | coatomer protein complex, subunit beta 1 | 0.521 |
| IPI00296635 | 2632 | GBE1 | glucan (1,4-alpha-), branching enzyme 1 | 0.514 |
| IPI00220219 | 9276 | COPB2 | coatomer protein complex, subunit beta 2 (beta prime) | 0.504 |
| IPI00020618 | 8369 | HIST1H4G | histone cluster 1, H4g | 0.500 |
| IPI00022255 | 10562 | OLFM4 | olfactomedin 4 | 0.497 |
| IPI00027409 | 5657 | PRTN3 | proteinase 3 | 0.496 |
| IPI00007750 | 7277 | TUBA4A | tubulin, alpha 4a | 0.485 |
| IPI00016610 | 5093 | PCBP1 | poly(rC) binding protein 1 | 0.483 |
| IPI00012728 | 2180 | ACSL1 | acyl-CoA synthetase long-chain family member 1 | 0.479 |
| IPI00024067 | 1213 | CLTC | clathrin, heavy chain (Hc) | 0.474 |
| IPI00013508 | 87 | ACTN1 | actinin, alpha 1 | 0.460 |
| IPI00028064 | 1511 | CTSG | cathepsin G | 0.456 |
| IPI00027497 | 2821 | GPI | glucose phosphate isomerase | 0.456 |
| IPI00008380 | 5515 | PPP2CA | protein phosphatase 2 (formerly 2A), catalytic subunit, alpha isoform | 0.455 |
| IPI00744706 | 6709 | SPTAN1 | spectrin, alpha, non-erythrocytic 1 (alpha-fodrin) | 0.453 |
| IPI00021290 | 47 | ACLY | ATP citrate lyase | 0.451 |
| IPI00413587 | 637 | BID | BH3 interacting domain death agonist | 0.450 |
| IPI00010796 | 5034 | P4HB | procollagen-proline, 2-oxoglutarate 4-dioxygenase, beta polypeptide | 0.450 |
| IPI00021428 | 58 | ACTA1 | actin, alpha 1, skeletal muscle | 0.448 |
| IPI00297444 | 57126 | CD177 | CD177 molecule | 0.446 |
| IPI00242956 | 8857 | FCGBP | Fc fragment of IgG binding protein | 0.445 |
| IPI00295857 | 1314 | COPA | coatomer protein complex, subunit alpha | 0.445 |
| IPI00155168 | 5788 | PTPRC | protein tyrosine phosphatase, receptor type, C | 0.434 |
| IPI00328257 | 162 | AP1B1 | adaptor-related protein complex 1, beta 1 subunit | 0.430 |
| IPI00017184 | 10938 | EHD1 | EH-domain containing 1 | 0.426 |

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|-------------|--------|-----------|--|--------|
| IPI00022391 | 325 | APCS | amyloid P component, serum | 0.422 |
| IPI00218638 | 4542 | MYO1F | myosin IF | 0.420 |
| IPI00303318 | 51571 | FAM49B | family with sequence similarity 49, member B | 0.417 |
| IPI00654755 | 3043 | HBB | hemoglobin, beta | -0.417 |
| IPI00021304 | 3849 | KRT2 | keratin 2 (epidermal ichthyosis bullosa of Siemens) | -0.424 |
| IPI00298497 | 2244 | FBG | fibrinogen beta chain | -0.426 |
| IPI00006114 | 5176 | SERPINF1 | serpin peptidase inhibitor, clade F , member 1 | -0.428 |
| IPI00414283 | 2335 | FN1 | fibronectin 1 | -0.436 |
| IPI00298828 | 350 | APOH | apolipoprotein H (beta-2-glycoprotein I) | -0.440 |
| IPI00027019 | 5545 | PRB4 | proline-rich protein BstNI subfamily 4 | -0.453 |
| IPI00796878 | 94160 | ABCC12 | ATP-binding cassette, sub-family C (CFTR/MRP), member 12 | -0.468 |
| IPI00022895 | 1 | A1BG | alpha-1-B glycoprotein | -0.485 |
| IPI00006705 | 7356 | SCGB1A1 | secretoglobin, family 1A, member 1 (uteroglobin) | -0.487 |
| IPI00026320 | 51366 | UBR5 | ubiquitin protein ligase E3 component n-recognition 5 | -0.516 |
| IPI00009865 | 3858 | KRT10 | keratin 10 (epidermolytic hyperkeratosis; keratosis palmaris et plantaris) | -0.522 |
| IPI00028306 | 85458 | DIXDC1 | DIX domain containing 1 | -0.564 |
| IPI00298237 | 1200 | TPP1 | tripeptidyl peptidase I | -0.584 |
| IPI00021885 | 2243 | FGA | fibrinogen alpha chain | -0.589 |
| IPI00216318 | 7529 | YWHAB | tyrosine 3-monoxygenase/tryptophan 5-monoxygenase activation protein, I | 0.408 |
| IPI00216699 | 83706 | FERMT3 | fermitin family homolog 3 (Drosophila) | 0.404 |
| IPI00644712 | 2547 | XRCC6 | X-ray repair complementing defective repair in Chinese hamster cells 6 | 0.400 |
| IPI00306960 | 4677 | NARS | asparaginyl-tRNA synthetase | 0.397 |
| IPI00002459 | 309 | ANXA6 | annexin A6 | 0.391 |
| IPI00026185 | 832 | CAPZB | capping protein (actin filament) muscle Z-line, beta | 0.391 |
| IPI00004573 | 5284 | PIGR | polymeric immunoglobulin receptor | 0.390 |
| IPI00022449 | 1794 | DOCK2 | dedicator of cytokinesis 2 | 0.388 |
| IPI00001639 | 3837 | KPNB1 | karyopherin (importin) beta 1 | 0.387 |
| IPI00297160 | 960 | CD44 | CD44 molecule (Indian blood group) | 0.384 |
| IPI00296654 | 80341 | BPIL1 | bactericidal/permeability-increasing protein-like 1 | 0.384 |
| IPI00013219 | 3611 | ILK | integrin-linked kinase | 0.381 |
| IPI00013163 | 4332 | MNDA | myeloid cell nuclear differentiation antigen | 0.378 |
| IPI00783982 | 22820 | COPG | coatomer protein complex, subunit gamma | 0.377 |
| IPI00100160 | 55832 | CAND1 | cullin-associated and neddylation-dissociated 1 | 0.377 |
| IPI00026833 | 159 | ADSS | adenylosuccinate synthase | 0.377 |
| IPI00299547 | 3934 | LCN2 | lipocalin 2 | 0.376 |
| IPI00014338 | 4689 | NCF4 | neutrophil cytosolic factor 4, 40kDa | 0.375 |
| IPI00003348 | 2783 | GNB2 | guanine nucleotide binding protein (G protein), beta polypeptide 2 | 0.374 |
| IPI00220834 | 7520 | XRCC5 | X-ray repair complementing defective repair in Chinese hamster cells 5 | 0.374 |
| IPI00029769 | 3055 | HCK | hemopoietic cell kinase | 0.373 |
| IPI00025202 | 752 | FMNL1 | formin-like 1 | 0.373 |
| IPI00299024 | 10409 | BASP1 | brain abundant, membrane attached signal protein 1 | 0.372 |
| IPI00027626 | 908 | CCT6A | chaperonin containing TCP1, subunit 6A (zeta 1) | 0.370 |
| IPI00019971 | 6813 | STXBP2 | syntaxis binding protein 2 | 0.368 |
| IPI00183046 | 5777 | PTPN6 | protein tyrosine phosphatase, non-receptor type 6 | 0.366 |
| IPI00641229 | 3494 | IGHA2 | immunoglobulin heavy constant alpha 2 (A2m marker) | 0.365 |
| IPI00218646 | 1536 | CYBB | cytochrome b-245, beta polypeptide (chronic granulomatous disease) | 0.365 |
| IPI00060181 | 79180 | EFDH2 | EF-hand domain family, member D2 | 0.364 |
| IPI00216514 | 961 | CD47 | CD47 molecule | 0.364 |
| IPI00554811 | 10093 | ARPC4 | actin related protein 2/3 complex, subunit 4, 20kDa | 0.364 |
| IPI00010133 | 11151 | CORO1A | coronin, actin binding protein, 1A | 0.363 |
| IPI00005614 | 6711 | SPTBN1 | spectrin, beta, non-erythrocytic 1 | 0.362 |
| IPI00003935 | 8349 | HIST2H2BE | histone cluster 2, H2be | 0.360 |
| IPI00031131 | 57136 | C20orf3 | chromosome 20 open reading frame 3 | 0.359 |
| IPI00033494 | 103910 | MRLC2 | myosin regulatory light chain MRLC2 | 0.356 |
| IPI00010270 | 5880 | RAC2 | ras-related C3 botulinum toxin substrate 2 | 0.356 |
| IPI00009342 | 8826 | IQGAP1 | IQ motif containing GTPase activating protein 1 | 0.354 |
| IPI00019038 | 4069 | LYZ | lysozyme (renal amyloidosis) | 0.346 |
| IPI00550212 | 23191 | CYFIP1 | cytoplasmic FMR1 interacting protein 1 | 0.345 |
| IPI00018146 | 10971 | YWHAQ | tyrosine 3-monoxygenase/tryptophan 5-monoxygenase activation protein, I | 0.345 |
| IPI00029568 | 5806 | PTX3 | pentraxin-related gene, rapidly induced by IL-1 beta | 0.340 |
| IPI00328350 | 116496 | FAM129A | family with sequence similarity 129, member A | 0.338 |
| IPI00020599 | 811 | CALR | calreticulin | 0.338 |

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|-------------|--------|-----------|---|-------|
| IPI00000105 | 9961 | MVP | major vault protein | 0.337 |
| IPI00018465 | 10574 | CCT7 | chaperonin containing TCP1, subunit 7 (eta) | 0.334 |
| IPI00012578 | 3840 | KPNA4 | karyopherin alpha 4 (importin alpha 3) | 0.334 |
| IPI00216256 | 9948 | WDR1 | WD repeat domain 1 | 0.330 |
| IPI00302927 | 10575 | CCT4 | chaperonin containing TCP1, subunit 4 (delta) | 0.330 |
| IPI00643920 | 7086 | TKT | transketolase (Wernicke-Korsakoff syndrome) | 0.329 |
| IPI00033022 | 1785 | DNM2 | dynamin 2 | 0.328 |
| IPI00019502 | 4627 | MYH9 | myosin, heavy chain 9, non-muscle | 0.322 |
| IPI00216008 | 2539 | G6PD | glucose-6-phosphate dehydrogenase | 0.317 |
| IPI00005721 | 1667 | DEFA1 | defensin, alpha 1; defensin, alpha 1 | 0.315 |
| IPI00465439 | 226 | ALDOA | aldolase A, fructose-bisphosphate | 0.311 |
| IPI00220301 | 9588 | PRDX6 | peroxiredoxin 6 | 0.307 |
| IPI00026268 | 2782 | GNB1 | guanine nucleotide binding protein (G protein), beta polypeptide 1 | 0.304 |
| IPI00294187 | 11240 | PADI2 | peptidyl arginine deiminase, type II | 0.302 |
| IPI00024915 | 25824 | PRDX5 | peroxiredoxin 5 | 0.299 |
| IPI00552578 | 6288 | SAA1 | serum amyloid A1 | 0.299 |
| IPI00018873 | 10135 | NAMPT | nicotinamide phosphoribosyltransferase | 0.299 |
| IPI00152418 | 1604 | CD55 | CD55 molecule, decay accelerating factor for complement | 0.298 |
| IPI00453473 | 8294 | HIST1H4I | histone cluster 1, H4i | 0.293 |
| IPI00218131 | 6283 | S100A12 | S100 calcium binding protein A12 | 0.293 |
| IPI00641950 | 10399 | GNB2L1 | guanine nucleotide binding protein (G protein), beta polypeptide 2-like 1 | 0.292 |
| IPI00021070 | 4688 | NCF2 | neutrophil cytosolic factor 2 (65kDa, chronic granulomatous disease, autosomal recessive) | 0.292 |
| IPI00220740 | 4869 | NPM1 | nucleophosmin (nucleolar phosphoprotein B23, numatrin) | 0.291 |
| IPI00065486 | 10058 | ABCB6 | ATP-binding cassette, sub-family B (MDR/TAP), member 6 | 0.291 |
| IPI00157757 | 64780 | MICAL1 | microtubule associated monooxygenase, calponin and LIM domain containing 1 | 0.291 |
| IPI00008307 | 23569 | PADI4 | peptidyl arginine deiminase, type IV | 0.291 |
| IPI00296526 | 55577 | NAGK | N-acetylglucosamine kinase | 0.287 |
| IPI00297779 | 10576 | CCT2 | chaperonin containing TCP1, subunit 2 (beta) | 0.286 |
| IPI00219682 | 2040 | STOM | stomatin | 0.284 |
| IPI00012007 | 191 | AHCY | S-adenosylhomocysteine hydrolase | 0.279 |
| IPI00171611 | 126961 | HIST2H3C | histone cluster 2, H3c | 0.278 |
| IPI00292530 | 3697 | ITIH1 | inter-alpha (globulin) inhibitor H1 | 0.273 |
| IPI00298961 | 7514 | XPO1 | exportin 1 (CRM1 homolog, yeast) | 0.271 |
| IPI00021263 | 7534 | YWHAZ | tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide | 0.268 |
| IPI00456969 | 1778 | DYNC1H1 | dynein, cytoplasmic 1, heavy chain 1 | 0.268 |
| IPI00013808 | 81 | ACTN4 | actinin, alpha 4 | 0.267 |
| IPI00003949 | 7334 | UBE2N | ubiquitin-conjugating enzyme E2N (UBC13 homolog, yeast) | 0.266 |
| IPI00789605 | 4637 | MYL6 | myosin, light chain 6, alkali, smooth muscle and non-muscle | 0.266 |
| IPI00024095 | 306 | ANXA3 | annexin A3 | 0.264 |
| IPI00306436 | 6774 | STAT3 | signal transducer and activator of transcription 3 (acute-phase response factor) | 0.263 |
| IPI00005118 | 3101 | HK3 | hexokinase 3 (white cell) | 0.258 |
| IPI00011285 | 823 | CAPN1 | calpain 1, (mu/l) large subunit | 0.257 |
| IPI00022977 | 1152 | CKB | creatine kinase, brain | 0.256 |
| IPI00027444 | 1992 | SERPINB1 | serpin peptidase inhibitor, clade B (ovalbumin), member 1 | 0.255 |
| IPI00298994 | 7094 | TLN1 | talin 1 | 0.255 |
| IPI00027230 | 7184 | HSP90B1 | heat shock protein 90kDa beta (Grp94), member 1 | 0.254 |
| IPI00147874 | 54187 | NANS | N-acetylneuraminate acid synthase (sialic acid synthase) | 0.253 |
| IPI00005162 | 10094 | ARPC3 | actin related protein 2/3 complex, subunit 3, 21kDa | 0.253 |
| IPI00027007 | 648998 | LOC648998 | similar to Neutrophil cytosol factor 1 | 0.252 |
| IPI00219038 | 3020 | H3F3A | H3 histone, family 3A | 0.252 |
| IPI00005159 | 10097 | ACTR2 | ARP2 actin-related protein 2 homolog (yeast) | 0.250 |
| IPI00220578 | 2773 | GNAI3 | guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 3 | 0.247 |
| IPI00217906 | 2771 | GNAI2 | guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2 | 0.246 |
| IPI00184996 | 57119 | SPINLW1 | serine peptidase inhibitor-like, with Kunitz and WAP domains 1 (eppin) | 0.246 |
| IPI00022744 | 1434 | CSE1L | CSE1 chromosome segregation 1-like (yeast) | 0.244 |
| IPI00007682 | 523 | ATP6V1A | ATPase, H ⁺ transporting, lysosomal 70kDa, V1 subunit A | 0.243 |
| IPI00419916 | 249 | ALPL | alkaline phosphatase, liver/bone/kidney | 0.240 |
| IPI00021439 | 60 | ACTB | actin, beta | 0.238 |
| IPI00010471 | 3936 | LCP1 | lymphocyte cytosolic protein 1 (L-plastin) | 0.237 |
| IPI00005969 | 829 | CAPZA1 | capping protein (actin filament) muscle Z-line, alpha 1 | 0.236 |
| IPI00384051 | 5721 | PSME2 | proteasome (prosome, macropain) activator subunit 2 (PA28 beta) | 0.235 |
| IPI00168184 | 5518 | PPP2R1A | protein phosphatase 2 (formerly 2A), regulatory subunit A, alpha isoform | 0.229 |

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|-------------|--------|-----------|---|-------|
| IPI00292858 | 1890 | TYMP | thymidine phosphorylase | 0.228 |
| IPI00217966 | 3939 | LDHA | lactate dehydrogenase A | 0.226 |
| IPI00642211 | 6051 | RNPEP | arginyl aminopeptidase (aminopeptidase B) | 0.225 |
| IPI00026216 | 9520 | NPEPPS | aminopeptidase puromycin sensitive | 0.225 |
| IPI00022229 | 338 | APOB | apolipoprotein B (including Ag(x) antigen) | 0.222 |
| IPI00028091 | 10096 | ACTR3 | ARP3 actin-related protein 3 homolog (yeast) | 0.222 |
| IPI00005161 | 10109 | ARPC2 | actin related protein 2/3 complex, subunit 2, 34kDa | 0.221 |
| IPI00013418 | 329 | BIRC2 | baculoviral IAP repeat-containing 2 | 0.220 |
| IPI00018931 | 55737 | VPS35 | vacuolar protein sorting 35 homolog (S. cerevisiae) | 0.208 |
| IPI00022774 | 7415 | VCP | valosin-containing protein | 0.204 |
| IPI0000873 | 7407 | VARS | valyl-tRNA synthetase | 0.203 |
| IPI00026781 | 2194 | FASN | fatty acid synthase | 0.202 |
| IPI00029468 | 10121 | ACTR1A | ARP1 actin-related protein 1 homolog A, centracin alpha (yeast) | 0.195 |
| IPI00011654 | 203068 | TUBB | tubulin, beta | 0.190 |
| IPI00329331 | 7360 | UGP2 | UDP-glucose pyrophosphorylase 2 | 0.185 |
| IPI00855918 | 727897 | MUC5B | mucin 5B, oligomeric mucus/gel-forming | 0.181 |
| IPI00026087 | 8815 | BANF1 | barrier to autointegration factor 1 | 0.178 |
| IPI00022371 | 3273 | HRG | histidine-rich glycoprotein | 0.178 |
| IPI00103552 | 94025 | MUC16 | mucin 16, cell surface associated | 0.175 |
| IPI00000816 | 7531 | YWHAE | tyrosine 3-monoxygenase/tryptophan 5-monoxygenase activation protein, i | 0.168 |
| IPI00010896 | 1192 | CLIC1 | chloride intracellular channel 1 | 0.168 |
| IPI00219077 | 4048 | LTA4H | leukotriene A4 hydrolase | 0.168 |
| IPI00020567 | 392 | ARHGAP1 | Rho GTPase activating protein 1 | 0.163 |
| IPI00477597 | 3250 | HPR | haptoglobin-related protein | 0.159 |
| IPI00641073 | 80736 | SLC44A4 | solute carrier family 44, member 4 | 0.158 |
| IPI00004358 | 5834 | PYGB | phosphorylase, glycogen; brain | 0.156 |
| IPI00296608 | 730 | C7 | complement component 7 | 0.142 |
| IPI00026119 | 7317 | UBA1 | ubiquitin-like modifier activating enzyme 1 | 0.141 |
| IPI00018342 | 203 | AK1 | adenylate kinase 1 | 0.139 |
| IPI00739237 | 653879 | LOC653879 | similar to Complement C3 precursor | 0.138 |
| IPI00465248 | 2023 | ENO1 | enolase 1, (alpha) | 0.137 |
| IPI00003865 | 3312 | HSPA8 | heat shock 70kDa protein 8 | 0.137 |
| IPI00000874 | 5052 | PRDX1 | peroxiredoxin 1 | 0.131 |
| IPI00012500 | 83990 | BRIP1 | BRCA1 interacting protein C-terminal helicase 1 | 0.128 |
| IPI00218993 | 10808 | HSPH1 | heat shock 105kDa/110kDa protein 1 | 0.125 |
| IPI00023860 | 4673 | NAP1L1 | nucleosome assembly protein 1-like 1 | 0.124 |
| IPI00219365 | 4478 | MSN | moesin | 0.122 |
| IPI00008433 | 6193 | RPS5 | ribosomal protein S5 | 0.122 |
| IPI00257882 | 5184 | PEPD | peptidase D | 0.121 |
| IPI00290770 | 7203 | CCT3 | chaperonin containing TCP1, subunit 3 (gamma) | 0.121 |
| IPI00294739 | 25939 | SAMHD1 | SAM domain and HD domain 1 | 0.120 |
| IPI00012503 | 5660 | PSAP | prosaposin (variant Gaucher disease and variant metachromatic leukodystrophy) | 0.118 |
| IPI00030936 | 10103 | TSPAN1 | tetraspanin 1 | 0.109 |
| IPI00305461 | 3698 | ITIH2 | inter-alpha (globulin) inhibitor H2 | 0.107 |
| IPI00219525 | 5226 | PGD | phosphogluconate dehydrogenase | 0.106 |
| IPI00305978 | 8574 | AKR7A2 | aldo-keto reductase family 7, member A2 (aflatoxin aldehyde reductase) | 0.101 |
| IPI00022426 | 259 | AMBP | alpha-1-microglobulin/bikunin precursor | 0.099 |
| IPI00018451 | 10519 | CIB1 | calcium and integrin binding 1 (calmyrin) | 0.098 |
| IPI00291175 | 7414 | VCL | vinculin | 0.097 |
| IPI00419585 | 5478 | PPIA | peptidylprolyl isomerase A (cyclophilin A) | 0.093 |
| IPI00013955 | 4582 | MUC1 | mucin 1, cell surface associated | 0.090 |
| IPI00550069 | 6050 | RNH1 | ribonuclease/angiogenin inhibitor 1 | 0.089 |
| IPI00643041 | 5901 | RAN | RAN, member RAS oncogene family | 0.088 |
| IPI00013004 | 8566 | PDXK | pyridoxal (pyridoxine, vitamin B6) kinase | 0.088 |
| IPI00215914 | 375 | ARF1 | ADP-ribosylation factor 1 | 0.086 |
| IPI00027223 | 3417 | IDH1 | isocitrate dehydrogenase 1 (NADP+), soluble | 0.084 |
| IPI00302592 | 2316 | FLNA | filamin A, alpha (actin binding protein 280) | 0.082 |
| IPI00007058 | 57175 | CORO1B | coronin, actin binding protein, 1B | 0.081 |
| IPI00103397 | 4586 | MUC5AC | mucin 5AC, oligomeric mucus/gel-forming | 0.081 |
| IPI00016513 | 10890 | RAB10 | RAB10, member RAS oncogene family | 0.080 |
| IPI00418471 | 7431 | VIM | vimentin | 0.080 |
| IPI00847989 | 5315 | PKM2 | pyruvate kinase, muscle | 0.072 |

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|-------------|--------|-----------|--|--------|
| IPI00026314 | 2934 | GSN | gelsolin (amyloidosis, Finnish type) | 0.071 |
| IPI00023673 | 3959 | LGALS3BP | lectin, galactoside-binding, soluble, 3 binding protein | 0.070 |
| IPI00414676 | 3326 | HSP90AB1 | heat shock protein 90kDa alpha (cytosolic), class B member 1 | 0.069 |
| IPI00216319 | 7533 | YWHAH | tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, isoform 1 | 0.067 |
| IPI00030781 | 6772 | STAT1 | signal transducer and activator of transcription 1, 91kDa | 0.064 |
| IPI00012011 | 1072 | CFL1 | cofilin 1 (non-muscle) | 0.056 |
| IPI00220642 | 7532 | YWHAG | tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, isoform 2 | 0.055 |
| IPI00007812 | 526 | ATP6V1B2 | ATPase, H ⁺ transporting, lysosomal 56/58kDa, V1 subunit B2 | 0.055 |
| IPI00215768 | 2729 | GCLC | glutamate-cysteine ligase, catalytic subunit | 0.055 |
| IPI00000581 | 55611 | OTUB1 | OTU domain, ubiquitin aldehyde binding 1 | 0.051 |
| IPI00745872 | 213 | ALB | albumin | 0.051 |
| IPI00178926 | 3512 | IGJ | immunoglobulin J polypeptide, linker protein for immunoglobulin alpha and mu chains | 0.046 |
| IPI00291410 | 92747 | C20orf114 | chromosome 20 open reading frame 114 | 0.042 |
| IPI00022389 | 1401 | CRP | C-reactive protein, pentraxin-related | 0.040 |
| IPI00027463 | 6277 | S100A6 | S100 calcium binding protein A6 | 0.039 |
| IPI00017601 | 1356 | CP | ceruloplasmin (ferroxidase) | 0.038 |
| IPI00165579 | 55748 | CNDP2 | CNDP dipeptidase 2 (metallopeptidase M20 family) | 0.037 |
| IPI00012889 | 653509 | SFTPA1 | surfactant, pulmonary-associated protein A1 | 0.036 |
| IPI00179330 | 6233 | RPS27A | ribosomal protein S27a | 0.036 |
| IPI00298971 | 7448 | VTN | vitronectin | 0.035 |
| IPI00431645 | 3240 | HP | haptoglobin | 0.034 |
| IPI00186290 | 1938 | EEF2 | eukaryotic translation elongation factor 2 | 0.032 |
| IPI00171199 | 5684 | PSMA3 | proteasome (prosome, macropain) subunit, alpha type, 3 | 0.031 |
| IPI00016786 | 998 | CDC42 | cell division cycle 42 (GTP binding protein, 25kDa) | 0.029 |
| IPI00219217 | 3945 | LDHB | lactate dehydrogenase B | 0.026 |
| IPI00003362 | 3309 | HSPA5 | heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) | 0.024 |
| IPI00021854 | 336 | APOA2 | apolipoprotein A-II | 0.024 |
| IPI00013698 | 427 | ASAHI | N-acylsphingosine amidohydrolase (acid ceramidase) 1 | 0.022 |
| IPI00032328 | 3827 | KNG1 | kininogen 1 | 0.021 |
| IPI00031461 | 2665 | GDI2 | GDP dissociation inhibitor 2 | 0.016 |
| IPI00246058 | 10015 | PDCD6IP | programmed cell death 6 interacting protein | 0.015 |
| IPI00304925 | 3303 | HSPA1A | heat shock 70kDa protein 1A | 0.014 |
| IPI00414320 | 311 | ANXA11 | annexin A11 | 0.012 |
| IPI00008274 | 10487 | CAP1 | CAP, adenylate cyclase-associated protein 1 (yeast) | 0.011 |
| IPI00010720 | 22948 | CCT5 | chaperonin containing TCP1, subunit 5 (epsilon) | 0.004 |
| IPI00025491 | 1973 | EIF4A1 | eukaryotic translation initiation factor 4A, isoform 1 | 0.004 |
| IPI00018909 | 7033 | TFF3 | trefoil factor 3 (intestinal) | 0.003 |
| IPI00291262 | 1191 | CLU | clusterin | 0.001 |
| IPI00013890 | 2810 | SFN | stratifin | -0.002 |
| IPI00746388 | 7430 | EZR | ezrin | -0.003 |
| IPI00456750 | 64855 | FAM129B | family with sequence similarity 129, member B | -0.005 |
| IPI00025084 | 826 | CAPNS1 | calpain, small subunit 1 | -0.006 |
| IPI00291866 | 710 | SERPING1 | serpin peptidase inhibitor, clade G (C1 inhibitor), member 1, (angioedema, hereditary) | -0.018 |
| IPI00005171 | 3122 | HLA-DRA | major histocompatibility complex, class II, DR alpha | -0.018 |
| IPI00026260 | 4831 | NME2 | non-metastatic cells 2, protein (NM23B) expressed in | -0.019 |
| IPI00013895 | 6282 | S100A11 | S100 calcium binding protein A11 | -0.020 |
| IPI00169383 | 5230 | PGK1 | phosphoglycerate kinase 1 | -0.021 |
| IPI00478231 | 387 | RHOA | ras homolog gene family, member A | -0.022 |
| IPI00032313 | 6275 | S100A4 | S100 calcium binding protein A4 | -0.026 |
| IPI00218918 | 301 | ANXA1 | annexin A1 | -0.027 |
| IPI00218251 | 7052 | TGM2 | transglutaminase 2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase) | -0.027 |
| IPI00218319 | 7170 | TPM3 | tropomyosin 3 | -0.028 |
| IPI00029260 | 929 | CD14 | CD14 molecule | -0.028 |
| IPI00299086 | 6386 | SDCBP | syndecan binding protein (syntenin) | -0.031 |
| IPI00166768 | 84790 | TUBA1C | tubulin, alpha 1c | -0.031 |
| IPI00010779 | 7171 | TPM4 | tropomyosin 4 | -0.034 |
| IPI00304273 | 337 | APOA4 | apolipoprotein A-IV | -0.034 |
| IPI00018031 | 221 | ALDH3B1 | aldehyde dehydrogenase 3 family, member B1 | -0.038 |
| IPI00215997 | 928 | CD9 | CD9 molecule | -0.044 |
| IPI00382470 | 3320 | HSP90AA1 | heat shock protein 90kDa alpha (cytosolic), class A member 1 | -0.048 |
| IPI00289758 | 824 | CAPN2 | calpain 2, (m/II) large subunit | -0.049 |
| IPI00255052 | 4715 | NDUFB9 | NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9, 22kDa | -0.052 |

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| IPI00021841 | 335 | APOA1 | apolipoprotein A-I | -0.056 |
| IPI00296083 | 6439 | SFTPB | surfactant, pulmonary-associated protein B | -0.060 |
| IPI00156689 | 10493 | VAT1 | vesicle amine transport protein 1 homolog (T. californica) | -0.060 |
| IPI00019568 | 2147 | F2 | coagulation factor II (thrombin) | -0.061 |
| IPI00022395 | 735 | C9 | complement component 9 | -0.062 |
| IPI00168728 | 3507 | IGHM | immunoglobulin heavy constant mu | -0.064 |
| IPI00219757 | 2950 | GSTP1 | glutathione S-transferase pi | -0.064 |
| IPI00797709 | 23603 | CORO1C | coronin, actin binding protein, 1C | -0.064 |
| IPI00218192 | 3700 | ITIH4 | inter-alpha (globulin) inhibitor H4 (plasma Kallikrein-sensitive glycoprotein) | -0.067 |
| IPI00027442 | 16 | AARS | alanyl-tRNA synthetase | -0.067 |
| IPI00032179 | 462 | SERPINC1 | serpin peptidase inhibitor, clade C (antithrombin), member 1 | -0.071 |
| IPI00000190 | 975 | CD81 | CD81 molecule | -0.072 |
| IPI00657682 | 2938 | GSTA1 | glutathione S-transferase A1 | -0.074 |
| IPI00005160 | 10095 | ARPC1B | actin related protein 2/3 complex, subunit 1B, 41kDa | -0.079 |
| IPI00219018 | 2597 | GAPDH | glyceraldehyde-3-phosphate dehydrogenase | -0.087 |
| IPI00029863 | 5345 | SERPINF2 | serpin peptidase inhibitor, clade F, member 2 | -0.092 |
| IPI00021857 | 345 | APOC3 | apolipoprotein C-III | -0.092 |
| IPI00218732 | 5444 | PON1 | paraoxonase 1 | -0.094 |
| IPI00555812 | 2638 | GC | group-specific component (vitamin D binding protein) | -0.094 |
| IPI00166866 | 3493 | IGHA1 | immunoglobulin heavy constant alpha 1 | -0.097 |
| IPI00007067 | 152007 | C9orf19 | chromosome 9 open reading frame 19 | -0.104 |
| IPI00022429 | 5004 | ORM1 | orosomucoid 1 | -0.109 |
| IPI00022624 | 9052 | GPRC5A | G protein-coupled receptor, family C, group 5, member A | -0.112 |
| IPI00290566 | 6950 | TCP1 | t-complex 1 | -0.117 |
| IPI00784002 | 26278 | SACS | spastic ataxia of Charlevoix-Saguenay (sacsin) | -0.119 |
| IPI00006662 | 347 | APOD | apolipoprotein D | -0.125 |
| IPI00478003 | 2 | A2M | alpha-2-macroglobulin | -0.126 |
| IPI00305622 | 7051 | TGM1 | transglutaminase 1 | -0.129 |
| IPI00032220 | 183 | AGT | angiotensinogen (serpin peptidase inhibitor, clade A, member 8) | -0.133 |
| IPI00418169 | 302 | ANXA2 | annexin A2 | -0.133 |
| IPI00022488 | 3263 | HPX | hemopexin | -0.134 |
| IPI00099110 | 1755 | DMBT1 | deleted in malignant brain tumors 1 | -0.136 |
| IPI00292950 | 3053 | SERPIND1 | serpin peptidase inhibitor, clade D (heparin cofactor), member 1 | -0.137 |
| IPI00019591 | 629 | CFB | complement factor B | -0.149 |
| IPI00027341 | 822 | CAPG | capping protein (actin filament), gelsolin-like | -0.153 |
| IPI00879709 | 729 | C6 | complement component 6 | -0.153 |
| IPI00793199 | 307 | ANXA4 | annexin A4 | -0.153 |
| IPI00514026 | 375790 | AGRN | agrin | -0.165 |
| IPI00025447 | 1915 | EEF1A1 | eukaryotic translation elongation factor 1 alpha 1 | -0.169 |
| IPI00014055 | 9476 | NAPSA | napsin A aspartic peptidase | -0.171 |
| IPI00892671 | 3500 | IGHG1 | immunoglobulin heavy constant gamma 1 (G1m marker) | -0.172 |
| IPI00218914 | 216 | ALDH1A1 | aldehyde dehydrogenase 1 family, member A1 | -0.174 |
| IPI00465352 | 828 | CAPS | calcypophosine | -0.180 |
| IPI00029658 | 2202 | EFEMP1 | EGF-containing fibulin-like extracellular matrix protein 1 | -0.181 |
| IPI00221221 | 246 | ALOX15 | arachidonate 15-lipoxygenase | -0.181 |
| IPI00295400 | 7453 | WARS | tryptophanyl-tRNA synthetase | -0.182 |
| IPI00410714 | 3039 | HBA1 | hemoglobin, alpha 1 | -0.183 |
| IPI00019580 | 5340 | PLG | plasminogen | -0.184 |
| IPI00296183 | 218 | ALDH3A1 | aldehyde dehydrogenase 3 family, member A1 | -0.188 |
| IPI00021855 | 341 | APOC1 | apolipoprotein C-I | -0.188 |
| IPI00030706 | 10598 | AHSA1 | AHA1, activator of heat shock 90kDa protein ATPase homolog 1 (yeast) | -0.190 |
| IPI00221224 | 290 | ANPEP | alanyl (membrane) aminopeptidase | -0.190 |
| IPI00032258 | 720 | C4A | complement component 4A (Rodgers blood group) | -0.192 |
| IPI00008494 | 3383 | ICAM1 | intercellular adhesion molecule 1 (CD54), human rhinovirus receptor | -0.200 |
| IPI00455174 | 57186 | C20orf74 | chromosome 20 open reading frame 74 | -0.207 |
| IPI00011229 | 1509 | CTSD | cathepsin D | -0.208 |
| IPI00022463 | 7018 | TF | transferrin | -0.221 |
| IPI00032291 | 727 | C5 | complement component 5 | -0.223 |
| IPI00002966 | 3308 | HSPA4 | heat shock 70kDa protein 4 | -0.224 |
| IPI00001699 | 29108 | PYCARD | PYD and CARD domain containing | -0.227 |
| IPI00021727 | 722 | C4BPA | complement component 4 binding protein, alpha | -0.230 |
| IPI00553177 | 5265 | SERPINA1 | serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), memb | -0.231 |

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| IPI00066193 | 92304 | SCGB3A1 | secretoglobin, family 3A, member 1 | -0.236 |
| IPI00022394 | 714 | C1QC | complement component 1, q subcomponent, C chain | -0.237 |
| IPI00477992 | 713 | C1QB | complement component 1, q subcomponent, B chain | -0.238 |
| IPI00032311 | 3929 | LBP | lipopolysaccharide binding protein | -0.239 |
| IPI00294395 | 732 | C8B | complement component 8, beta polypeptide | -0.242 |
| IPI00021842 | 348 | APOE | apolipoprotein E | -0.258 |
| IPI00329801 | 308 | ANXA5 | annexin A5 | -0.258 |
| IPI00004656 | 567 | B2M | beta-2-microglobulin | -0.265 |
| IPI00289499 | 471 | ATIC | 5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclo | -0.268 |
| IPI00022431 | 197 | AHSG | alpha-2-HS-glycoprotein | -0.268 |
| IPI00291878 | 6441 | SFTP D | surfactant, pulmonary-associated protein D | -0.279 |
| IPI00021891 | 2266 | FGG | fibrinogen gamma chain | -0.284 |
| IPI00007910 | 10568 | SLC34A2 | solute carrier family 34 (sodium phosphate), member 2 | -0.286 |
| IPI00060800 | 124220 | LOC124220 | similar to common salivary protein 1 | -0.288 |
| IPI00018219 | 7045 | TGFBI | transforming growth factor, beta-induced, 68kDa | -0.304 |
| IPI00478209 | 401409 | RAB19 | RAB19, member RAS oncogene family | -0.305 |
| IPI00301618 | 9147 | SDCCAG1 | serologically defined colon cancer antigen 1 | -0.307 |
| IPI00029739 | 3075 | CFH | complement factor H | -0.309 |
| IPI00220151 | 9990 | SLC12A6 | solute carrier family 12 (potassium/chloride transporters), member 6 | -0.315 |
| IPI00217778 | 5360 | PLTP | phospholipid transfer protein | -0.317 |
| IPI00073772 | 2203 | FBP1 | fructose-1,6-bisphosphatase 1 | -0.326 |
| IPI00019359 | 3857 | KRT9 | keratin 9 (epidermolytic palmoplantar keratoderma) | -0.350 |
| IPI00020091 | 5005 | ORM2 | orosomucoid 2 | -0.354 |
| IPI00550363 | 8407 | TAGLN2 | transgelin 2 | -0.370 |
| IPI00293925 | 8547 | FCN3 | ficolin (collagen/fibrinogen domain containing) 3 (Hakata antigen) | -0.385 |
| IPI00220327 | 3848 | KRT1 | keratin 1 (epidermolytic hyperkeratosis) | -0.408 |
| IPI00550991 | 12 | SERPINA3 | serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), memb | -0.415 |