



**Table S1.** Protein List of Venn Diagram from Leukocyte Proteomic Study.

| Combination Groups      | Total Proteins | Code Prot. | Protein                                                 |
|-------------------------|----------------|------------|---------------------------------------------------------|
| CG, UG,<br>ERT-a, ERT-b | 139            | P09211     | Glutathione S-transferase P                             |
|                         |                | P00918     | Carbonic anhydrase 2                                    |
|                         |                | P13224     | Platelet glycoprotein Ib beta chain                     |
|                         |                | P30101     | Protein disulfide-isomerase A3                          |
|                         |                | P02675     | Fibrinogen beta chain                                   |
|                         |                | O15145     | Actin-related protein 2/3 complex subunit 3             |
|                         |                | P01859     | Immunoglobulin heavy constant gamma 2                   |
|                         |                | O14773     | Tripeptidyl-peptidase 1                                 |
|                         |                | Q15404     | Ras suppressor protein 1                                |
|                         |                | P06753     | Tropomyosin alpha-3 chain                               |
|                         |                | P07996     | Thrombospondin-1                                        |
|                         |                | P04264     | Keratin, type II cytoskeletal 1                         |
|                         |                | Q9ULV4     | Coronin-1C                                              |
|                         |                | P02647     | Apolipoprotein A-I                                      |
|                         |                | P59998     | Actin-related protein 2/3 complex subunit 4             |
|                         |                | O75594     | Peptidoglycan recognition protein 1                     |
|                         |                | P32119     | Peroxiredoxin-2                                         |
|                         |                | P02775     | Platelet basic protein                                  |
|                         |                | P30041     | Peroxiredoxin-6                                         |
|                         |                | P11142     | Heat shock cognate 71 kDa protein                       |
|                         |                | P63104     | 14-3-3 protein zeta/delta                               |
|                         |                | P22626     | Heterogeneous nuclear ribonucleoproteins A2/B1          |
|                         |                | P01876     | Immunoglobulin heavy constant alpha 1                   |
|                         |                | O00194     | Ras-related protein Rab-27B                             |
|                         |                | P01023     | Alpha-2-macroglobulin                                   |
|                         |                | P04179     | Superoxide dismutase [Mn], mitochondrial                |
|                         |                | P02671     | Fibrinogen alpha chain                                  |
|                         |                | P61158     | Actin-related protein 3                                 |
|                         |                | P04040     | Catalase                                                |
|                         |                | P37837     | Transaldolase                                           |
|                         |                | P63261     | Actin, cytoplasmic 2                                    |
|                         |                | P01871     | Immunoglobulin heavy constant mu                        |
|                         |                | P62258     | 14-3-3 protein epsilon                                  |
|                         |                | Q86UX7     | Fermitin family homolog 3                               |
|                         |                | P06744     | Glucose-6-phosphate isomerase                           |
|                         |                | P35908     | Keratin, type II cytoskeletal 2 epidermal               |
|                         |                | P14625     | Endoplasmic                                             |
|                         |                | P17213     | Bactericidal permeability-increasing protein            |
|                         |                | P04899     | Guanine nucleotide-binding protein G(i) subunit alpha-2 |
|                         |                | O75390     | Citrate synthase, mitochondrial                         |
|                         |                | Q15907     | Ras-related protein Rab-11B                             |
|                         |                | P02766     | Transthyretin                                           |
|                         |                | P62937     | Peptidyl-prolyl cis-trans isomerase A                   |
|                         |                | P40197     | Platelet glycoprotein V                                 |
|                         |                | P14780     | Matrix metalloproteinase-9                              |

|        |                                                         |
|--------|---------------------------------------------------------|
| P01011 | Alpha-1-antichymotrypsin                                |
| P11279 | Lysosome-associated membrane glycoprotein 1             |
| P99999 | Cytochrome c                                            |
| P08246 | Neutrophil elastase                                     |
| P61026 | Ras-related protein Rab-10                              |
| P20700 | Lamin-B1                                                |
| Q01518 | Adenylyl cyclase-associated protein 1                   |
| Q9HBI1 | Beta-parvin                                             |
| P07737 | Profilin-1                                              |
| P51149 | Ras-related protein Rab-7a                              |
| Q06830 | Peroxiredoxin-1                                         |
| Q05315 | Galectin-10                                             |
| P02042 | Hemoglobin subunit delta                                |
| P07359 | Platelet glycoprotein Ib alpha chain                    |
| P29401 | Transketolase                                           |
| P11215 | Integrin alpha-M                                        |
| P01834 | Immunoglobulin kappa constant                           |
| P02652 | Apolipoprotein A-II                                     |
| P05164 | Myeloperoxidase                                         |
| P61626 | Lysozyme C                                              |
| P30048 | Thioredoxin-dependent peroxide reductase, mitochondrial |
| P30740 | Leukocyte elastase inhibitor                            |
| P13645 | Keratin, type I cytoskeletal 10                         |
| Q9Y490 | Talin-1                                                 |
| P60660 | Myosin light polypeptide 6                              |
| P0DMV9 | Heat shock 70 kDa protein 1B                            |
| P31946 | 14-3-3 protein beta/alpha                               |
| P61769 | Beta-2-microglobulin                                    |
| Q13201 | Multimerin-1                                            |
| O15511 | Actin-related protein 2/3 complex subunit 5             |
| P01857 | Immunoglobulin heavy constant gamma 1                   |
| P08670 | Vimentin                                                |
| P61224 | Ras-related protein Rap-1b                              |
| P27695 | DNA-(apurinic or apyrimidinic site) lyase               |
| P02776 | Platelet factor 4                                       |
| P16671 | Platelet glycoprotein 4                                 |
| P02549 | Spectrin alpha chain, erythrocytic 1                    |
| Q9H299 | SH3 domain-binding glutamic acid-rich-like protein 3    |
| P01619 | Immunoglobulin kappa variable 3-20                      |
| P08514 | Integrin alpha-IIb                                      |
| P68871 | Hemoglobin subunit beta                                 |
| P04075 | Fructose-bisphosphate aldolase A                        |
| P49913 | Cathelicidin antimicrobial peptide                      |
| P60174 | Triosephosphate isomerase                               |
| P19105 | Myosin regulatory light chain 12A                       |
| P24158 | Myeloblastin                                            |
| P37802 | Transgelin-2                                            |
| P23528 | Cofilin-1                                               |
| P00738 | Haptoglobin                                             |

|                  |   |        |                                              |
|------------------|---|--------|----------------------------------------------|
|                  |   | O75083 | WD repeat-containing protein 1               |
|                  |   | P06733 | Alpha-enolase                                |
|                  |   | P62987 | Ubiquitin-60S ribosomal protein L40          |
|                  |   | P11021 | Endoplasmic reticulum chaperone BiP          |
|                  |   | P08962 | CD63 antigen                                 |
|                  |   | P06396 | Gelsolin                                     |
|                  |   | P21333 | Filamin-A                                    |
|                  |   | P06702 | Protein S100-A9                              |
|                  |   | P10909 | Clusterin                                    |
|                  |   | P62805 | Histone H4                                   |
|                  |   | P07355 | Annexin A2                                   |
|                  |   | P23284 | Peptidyl-prolyl cis-trans isomerase B        |
|                  |   | P05106 | Integrin beta-3                              |
|                  |   | P08575 | Receptor-type tyrosine-protein phosphatase C |
|                  |   | P18206 | Vinculin                                     |
|                  |   | P22894 | Neutrophil collagenase                       |
|                  |   | P35579 | Myosin-9                                     |
|                  |   | P02768 | Serum albumin                                |
|                  |   | P07237 | Protein disulfide-isomerase                  |
|                  |   | P61106 | Ras-related protein Rab-14                   |
|                  |   | P13796 | Plastin-2                                    |
|                  |   | P01009 | Alpha-1-antitrypsin                          |
|                  |   | P80188 | Neutrophil gelatinase-associated lipocalin   |
|                  |   | P02679 | Fibrinogen gamma chain                       |
|                  |   | P05556 | Integrin beta-1                              |
|                  |   | P02788 | Lactotransferrin                             |
|                  |   | O15144 | Actin-related protein 2/3 complex subunit 2  |
|                  |   | P12814 | Alpha-actinin-1                              |
|                  |   | P14770 | Platelet glycoprotein IX                     |
|                  |   | P02763 | Alpha-1-acid glycoprotein 1                  |
|                  |   | P27797 | Calreticulin                                 |
|                  |   | P04406 | Glyceraldehyde-3-phosphate dehydrogenase     |
|                  |   | P20160 | Azurocidin                                   |
|                  |   | P47756 | F-actin-capping protein subunit beta         |
|                  |   | P02730 | Band 3 anion transport protein               |
|                  |   | Q15084 | Protein disulfide-isomerase A6               |
|                  |   | P27105 | Erythrocyte band 7 integral membrane protein |
|                  |   | P00915 | Carbonic anhydrase 1                         |
|                  |   | P69905 | Hemoglobin subunit alpha                     |
|                  |   | P08311 | Cathepsin G                                  |
|                  |   | P08567 | Pleckstrin                                   |
|                  |   | P35527 | Keratin, type I cytoskeletal 9               |
|                  |   | P05109 | Protein S100-A8                              |
|                  |   | P26038 | Moesin                                       |
|                  |   | P06576 | ATP synthase subunit beta, mitochondrial     |
|                  |   | P08758 | Annexin A5                                   |
|                  |   | P40926 | Malate dehydrogenase, mitochondrial          |
| CG, UG,<br>ERT-a | 8 | Q08722 | Leukocyte surface antigen CD47               |
|                  |   | P61160 | Actin-related protein 2                      |
|                  |   | P69892 | Hemoglobin subunit gamma-2                   |
|                  |   | P09622 | Dihydrolipoyl dehydrogenase, mitochondrial   |

|                     |    |        |                                                                      |
|---------------------|----|--------|----------------------------------------------------------------------|
|                     |    | P38646 | Stress-70 protein, mitochondrial                                     |
|                     |    | P11166 | Solute carrier family 2,<br>facilitated glucose transporter member 1 |
| CG, UG,<br>ERT-b    | 1  | P61604 | 10 kDa heat shock protein, mitochondrial                             |
| UG, ERT-a,<br>ERT-b | 35 | Q9BSJ8 | Extended synaptotagmin-1                                             |
|                     |    | Q9HDC9 | Adipocyte plasma membrane-associated protein                         |
|                     |    | Q6UX06 | Olfactomedin-4                                                       |
|                     |    | P11678 | Eosinophil peroxidase                                                |
|                     |    | P05107 | Integrin beta-2                                                      |
|                     |    | P10599 | Thioredoxin                                                          |
|                     |    | P54819 | Adenylate kinase 2, mitochondrial                                    |
|                     |    | P13727 | Bone marrow proteoglycan                                             |
|                     |    | P00387 | NADH-cytochrome b5 reductase 3                                       |
|                     |    | O43707 | Alpha-actinin-4                                                      |
|                     |    | P46940 | Ras GTPase-activating-like protein IQGAP1                            |
|                     |    | Q10588 | ADP-ribosyl cyclase/cyclic ADP-ribose hydro-<br>lase 2               |
|                     |    | P61978 | Heterogeneous nuclear ribonucleoprotein K                            |
|                     |    | P52566 | Rho GDP-dissociation inhibitor 2                                     |
|                     |    | P01024 | Complement C3                                                        |
|                     |    | P10153 | Non-secretory ribonuclease                                           |
|                     |    | P16284 | Platelet endothelial cell adhesion molecule                          |
|                     |    | Q9Y624 | Junctional adhesion molecule A                                       |
|                     |    | P61981 | 14-3-3 protein gamma                                                 |
|                     |    | B9A064 | Immunoglobulin lambda-like polypeptide 5                             |
|                     |    | Q14019 | Coactosin-like protein                                               |
|                     |    | P16109 | P-selectin                                                           |
|                     |    | O75367 | Core histone macro-H2A.1                                             |
|                     |    | P01700 | Immunoglobulin lambda variable 1-47                                  |
|                     |    | P50995 | Annexin A11                                                          |
|                     |    | P02787 | Serotransferrin                                                      |
|                     |    | P52907 | F-actin-capping protein subunit alpha-1                              |
|                     |    | P21926 | CD9 antigen                                                          |
|                     |    | Q9P0L0 | Vesicle-associated membrane protein-associated<br>protein A          |
|                     |    | P02749 | Beta-2-glycoprotein 1                                                |
|                     |    | P12724 | Eosinophil cationic protein                                          |
|                     |    | P41218 | Myeloid cell nuclear differentiation antigen                         |
|                     |    | P50395 | Rab GDP dissociation inhibitor beta                                  |
|                     |    | P04275 | von Willebrand factor                                                |
|                     |    | Q6EEV6 | Small ubiquitin-related modifier 4                                   |
| CG, ERT-a,<br>ERT-b | 15 | P14618 | Pyruvate kinase PKM                                                  |
|                     |    | P12429 | Annexin A3                                                           |
|                     |    | P05089 | Arginase-1                                                           |
|                     |    | P04083 | Annexin A1                                                           |
|                     |    | O00299 | Chloride intracellular channel protein 1                             |
|                     |    | P07910 | Heterogeneous nuclear ribonucleoproteins<br>C1/C2                    |
|                     |    | P50552 | Vasodilator-stimulated phosphoprotein                                |
|                     |    | P06312 | Immunoglobulin kappa variable 4-1                                    |

|           |    |        |                                                                                                                  |
|-----------|----|--------|------------------------------------------------------------------------------------------------------------------|
|           |    | O15143 | Actin-related protein 2/3 complex subunit 1B                                                                     |
|           |    | P52209 | 6-phosphogluconate dehydrogenase, decarboxylating                                                                |
|           |    | P08133 | Annexin A6                                                                                                       |
|           |    | P26447 | Protein S100-A4                                                                                                  |
|           |    | P80511 | Protein S100-A12                                                                                                 |
|           |    | P36957 | Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial |
|           |    | P11277 | Spectrin beta chain, erythrocytic                                                                                |
| CG, UG    | 2  | Q9BTM1 | Histone H2A.J                                                                                                    |
|           |    | Q6P4A8 | Phospholipase B-like 1                                                                                           |
| UG, ERT-a | 27 | P10619 | Lysosomal protective protein                                                                                     |
|           |    | Q96C19 | EF-hand domain-containing protein D2                                                                             |
|           |    | P51659 | Peroxisomal multifunctional enzyme type 2                                                                        |
|           |    | P02751 | Fibronectin                                                                                                      |
|           |    | P55145 | Mesencephalic astrocyte-derived neurotrophic factor                                                              |
|           |    | P28066 | Proteasome subunit alpha type-5                                                                                  |
|           |    | P23368 | NAD-dependent malic enzyme, mitochondrial                                                                        |
|           |    | P19367 | Hexokinase-1                                                                                                     |
|           |    | P60953 | Cell division control protein 42 homolog                                                                         |
|           |    | P07339 | Cathepsin D                                                                                                      |
|           |    | Q9HD89 | Resistin                                                                                                         |
|           |    | P04844 | Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 2                                         |
|           |    | Q9H4B7 | Tubulin beta-1 chain                                                                                             |
|           |    | O75636 | Ficolin-3                                                                                                        |
|           |    | Q13011 | Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial                                                       |
|           |    | O94919 | Endonuclease domain-containing 1 protein                                                                         |
|           |    | Q04917 | 14-3-3 protein eta                                                                                               |
|           |    | P00491 | Purine nucleoside phosphorylase                                                                                  |
|           |    | P01137 | Transforming growth factor beta-1 proprotein                                                                     |
|           |    | P50148 | Guanine nucleotide-binding protein G(q) subunit alpha                                                            |
|           |    | P13667 | Protein disulfide-isomerase A4                                                                                   |
|           |    | P00390 | Glutathione reductase, mitochondrial                                                                             |
|           |    | Q13231 | Chitotriosidase-1                                                                                                |
|           |    | P49721 | Proteasome subunit beta type-2                                                                                   |
|           |    | P07900 | Heat shock protein HSP 90-alpha                                                                                  |
|           |    | P25787 | Proteasome subunit alpha type-2                                                                                  |
|           |    | Q9Y6C2 | EMILIN-1                                                                                                         |
| UG, ERT-b | 3  | P05155 | Plasma protease C1 inhibitor                                                                                     |
|           |    | P84077 | ADP-ribosylation factor 1                                                                                        |
|           |    | P01624 | Immunoglobulin kappa variable 3-15                                                                               |
| CG, ERT-a | 12 | P13647 | Keratin, type II cytoskeletal 5                                                                                  |
|           |    | Q92820 | Gamma-glutamyl hydrolase                                                                                         |
|           |    | Q5VTE0 | Putative elongation factor 1-alpha-like 3                                                                        |
|           |    | P16157 | Ankyrin-1                                                                                                        |
|           |    | P31146 | Coronin-1 <sup>a</sup>                                                                                           |

|              |    |  |        |                                                                      |
|--------------|----|--|--------|----------------------------------------------------------------------|
|              |    |  | P67936 | Tropomyosin alpha-4 chain                                            |
|              |    |  | P61006 | Ras-related protein Rab-8A                                           |
|              |    |  | Q14697 | Neutral alpha-glucosidase AB                                         |
| CG, ERT-b    | 3  |  | P00488 | Coagulation factor XIII A chain                                      |
|              |    |  | P00338 | L-lactate dehydrogenase A chain                                      |
|              |    |  | P10809 | 60 kDa heat shock protein, mitochondrial                             |
|              |    |  | Q99879 | Histone H2B type 1-M                                                 |
|              |    |  | P53597 | Succinate--CoA ligase [ADP/GDP-forming] subunit alpha, mitochondrial |
|              |    |  | P04433 | Immunoglobulin kappa variable 3-11                                   |
|              |    |  | P0DOY3 | Immunoglobulin lambda constant 3                                     |
| ERT-a, ERT-b | 16 |  | P13639 | Elongation factor 2                                                  |
|              |    |  | Q9BQE3 | Tubulin alpha-1C chain                                               |
|              |    |  | Q96AP7 | Endothelial cell-selective adhesion molecule                         |
|              |    |  | P27348 | 14-3-3 protein theta                                                 |
|              |    |  | P17931 | Galectin-3                                                           |
|              |    |  | P27824 | Calnexin                                                             |
|              |    |  | P30040 | Endoplasmic reticulum resident protein 29                            |
|              |    |  | Q99439 | Calponin-2                                                           |
|              |    |  | P30044 | Peroxiredoxin-5, mitochondrial                                       |
|              |    |  | P78417 | Glutathione S-transferase omega-1                                    |
|              |    |  | P11169 | Solute carrier family 2, facilitated glucose transporter member 3    |
|              |    |  | Q9Y2Y8 | Proteoglycan 3                                                       |
|              |    |  | P59666 | Neutrophil defensin 3                                                |
|              |    |  | P31949 | Protein S100-A11                                                     |
|              |    |  | P13473 | Lysosome-associated membrane glycoprotein 2                          |
|              |    |  | O75015 | Low affinity immunoglobulin gamma Fc region receptor III-B           |
| UG           | 20 |  | P28065 | Proteasome subunit beta type-9                                       |
|              |    |  | P26641 | Elongation factor 1-gamma                                            |
|              |    |  | P02774 | Vitamin D-binding protein                                            |
|              |    |  | P40121 | Macrophage-capping protein                                           |
|              |    |  | P25788 | Proteasome subunit alpha type-3                                      |
|              |    |  | P32942 | Intercellular adhesion molecule 3                                    |
|              |    |  | P36222 | Chitinase-3-like protein 1                                           |
|              |    |  | O14672 | Disintegrin and metalloproteinase domain-containing protein 10       |
|              |    |  | P62314 | Small nuclear ribonucleoprotein Sm D1                                |
|              |    |  | P04217 | Alpha-1B-glycoprotein                                                |
|              |    |  | Q9NRW1 | Ras-related protein Rab-6B                                           |
|              |    |  | P07437 | Tubulin beta chain                                                   |
|              |    |  | Q99880 | Histone H2B type 1-L                                                 |
|              |    |  | Q9NQC3 | Reticulon-4                                                          |
|              |    |  | P20292 | Arachidonate 5-lipoxygenase-activating protein                       |
|              |    |  | P20061 | Transcobalamin-1                                                     |
|              |    |  | P18669 | Phosphoglycerate mutase 1                                            |
|              |    |  | P24557 | Thromboxane-A synthase                                               |
|              |    |  | Q16778 | Histone H2B type 2-E                                                 |
|              |    |  | P42785 | Lysosomal Pro-X carboxypeptidase                                     |

|        |    |        |                                                                  |
|--------|----|--------|------------------------------------------------------------------|
| CG     | 15 | P48735 | Isocitrate dehydrogenase [NADP], mitochondrial                   |
|        |    | P48059 | LIM and senescent cell antigen-like-containing domain protein 1  |
|        |    | Q14677 | Clathrin interactor 1                                            |
|        |    | P00558 | Phosphoglycerate kinase 1                                        |
|        |    | O94925 | Glutaminase kidney isoform, mitochondrial                        |
|        |    | P16452 | Erythrocyte membrane protein band 4.2                            |
|        |    | P62879 | Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-2 |
|        |    | P26583 | High mobility group protein B2                                   |
|        |    | P69891 | Hemoglobin subunit gamma-1                                       |
|        |    | P02533 | Keratin, type I cytoskeletal 14                                  |
|        |    | P06737 | Glycogen phosphorylase, liver form                               |
|        |    | P25705 | ATP synthase subunit alpha, mitochondrial                        |
|        |    | P55072 | Transitional endoplasmic reticulum ATPase                        |
|        |    | P60709 | Actin, cytoplasmic 1                                             |
|        |    | Q562R1 | Beta-actin-like protein 2                                        |
| ERT-a. | 49 | P09651 | Heterogeneous nuclear ribonucleoprotein A1                       |
|        |    | P17301 | Integrin alpha-2                                                 |
|        |    | P68431 | Histone H3.1                                                     |
|        |    | Q9ULZ3 | Apoptosis-associated speck-like protein containing a CARD        |
|        |    | Q01082 | Spectrin beta chain, non-erythrocytic 1                          |
|        |    | Q13813 | Spectrin alpha chain, non-erythrocytic 1                         |
|        |    | O75563 | Src kinase-associated phosphoprotein 2                           |
|        |    | P47755 | F-actin-capping protein subunit alpha-2                          |
|        |    | P51148 | Ras-related protein Rab-5C                                       |
|        |    | P07225 | Vitamin K-dependent protein S                                    |
|        |    | Q9HCN6 | Platelet glycoprotein VI                                         |
|        |    | Q9UIB8 | SLAM family member 5                                             |
|        |    | Q9UBW5 | Bridging integrator 2                                            |
|        |    | Q16698 | 2,4-dienoyl-CoA reductase, mitochondrial                         |
|        |    | Q96E39 | RNA binding motif protein, X-linked-like-1                       |
|        |    | P12259 | Coagulation factor V                                             |
|        |    | O95831 | Apoptosis-inducing factor 1, mitochondrial                       |
|        |    | P0C0L5 | Complement C4-B                                                  |
|        |    | P11413 | Glucose-6-phosphate 1-dehydrogenase                              |
|        |    | P09467 | Fructose-1,6-bisphosphatase 1                                    |
|        |    | Q5TFQ8 | Signal-regulatory protein beta-1 isoform 3                       |
|        |    | P68036 | Ubiquitin-conjugating enzyme E2 L3                               |
|        |    | P84243 | Histone H3.3                                                     |
|        |    | P40925 | Malate dehydrogenase, cytoplasmic                                |
|        |    | Q13418 | Integrin-linked protein kinase                                   |
|        |    | P13598 | Intercellular adhesion molecule 2                                |
|        |    | P49720 | Proteasome subunit beta type-3                                   |
|        |    | Q96AG4 | Leucine-rich repeat-containing protein 59                        |
|        |    | O75368 | SH3 domain-binding glutamic acid-rich-like protein               |
|        |    | Q9UL25 | Ras-related protein Rab-21                                       |
|        |    | O75629 | rotein CREG1                                                     |

|       |    |        |                                                            |
|-------|----|--------|------------------------------------------------------------|
|       |    | Q92882 | Osteoclast-stimulating factor 1                            |
|       |    | P07384 | Calpain-1 catalytic subunit                                |
|       |    | P63162 | Small nuclear ribonucleoprotein-associated protein N       |
|       |    | Q14165 | Malectin                                                   |
|       |    | P52565 | Rho GDP-dissociation inhibitor 1                           |
|       |    | Q9Y3D6 | Mitochondrial fission 1 protein                            |
|       |    | P12931 | Proto-oncogene tyrosine-protein kinase Src                 |
|       |    | Q9P035 | Very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase 3       |
|       |    | Q9H0U4 | Ras-related protein Rab-1B                                 |
|       |    | P61225 | Ras-related protein Rap-2b                                 |
|       |    | Q9UFN0 | Protein NipSnap homolog 3A                                 |
|       |    | Q99497 | Parkinson disease protein 7                                |
|       |    | P30405 | Peptidyl-prolyl cis-trans isomerase F, mitochondrial       |
|       |    | P28676 | Grancalcin                                                 |
|       |    | O75695 | Protein XRP2                                               |
|       |    | P29350 | Tyrosine-protein phosphatase non-receptor type 6           |
|       |    | Q00839 | Heterogeneous nuclear ribonucleoprotein U                  |
|       |    | Q8NBM8 | Prenylcysteine oxidase-like                                |
| ERT-b | 10 | Q71DI3 | Histone H3.2                                               |
|       |    | P80748 | Immunoglobulin lambda variable 3-21                        |
|       |    | P00751 | Complement factor B                                        |
|       |    | A2NJV5 | Immunoglobulin kappa variable 2-29                         |
|       |    | O75131 | Copine-3                                                   |
|       |    | P08637 | Low affinity immunoglobulin gamma Fc region receptor III-A |
|       |    | Q12913 | Receptor-type tyrosine-protein phosphatase eta             |
|       |    | Q5SQ64 | Lymphocyte antigen 6 complex locus protein G6f             |
|       |    | Q9H4G4 | Golgi-associated plant pathogenesis-related protein 1      |
|       |    | Q9UQ80 | Proliferation-associated protein 2G4                       |



**Table S2.** SWATCH Study Protein Lists in Leukocyte Cells.

| <b>Upregulated Proteins in Control, Compared in Untreated</b> |                                                                 |                |           |
|---------------------------------------------------------------|-----------------------------------------------------------------|----------------|-----------|
| <b>Protein</b>                                                | <b>Group</b>                                                    | <b>p-Value</b> | <b>FC</b> |
| P14618                                                        | Pyruvate kinase PKM                                             | 0,0079         | 18,6354   |
| P04406                                                        | Glyceraldehyde-3-phosphate dehydrogenase                        | 0,0003         | 18,5390   |
| P00338                                                        | L-lactate dehydrogenase A chain                                 | 0,0023         | 15,8861   |
| P16402                                                        | Histone H1.3                                                    | 0,0007         | 13,1325   |
| P16401                                                        | Histone H1.5                                                    | 0,0030         | 11,1611   |
| P00558                                                        | Phosphoglycerate kinase 1                                       | 0,0052         | 11,0840   |
| Q9NTK5                                                        | Obg-like ATPase 1                                               | 0,0054         | 9,0976    |
| P52209                                                        | 6-phosphogluconate dehydrogenase, decarboxylating               | 0,0378         | 8,8029    |
| P06737                                                        | Glycogen phosphorylase, liver form                              | 0,0019         | 8,5721    |
| P62826                                                        | GTP-binding nuclear protein Ran                                 | 0,0126         | 7,8279    |
| P26038                                                        | Moesin                                                          | 0,0018         | 7,8019    |
| P31146                                                        | Coronin-1A                                                      | 0,0268         | 7,7937    |
| P06744                                                        | Glucose-6-phosphate isomerase                                   | 0,0182         | 6,0802    |
| P26583                                                        | High mobility group protein B2                                  | 0,0043         | 5,3391    |
| P10809                                                        | 60 kDa heat shock protein, mitochondrial                        | 0,0000         | 5,2493    |
| P04083                                                        | Annexin A1                                                      | 0,0018         | 4,9757    |
| P68871                                                        | Hemoglobin subunit beta                                         | 0,0031         | 4,8483    |
| P07195                                                        | L-lactate dehydrogenase B chain                                 | 0,0002         | 4,4237    |
| P55072                                                        | Transitional endoplasmic reticulum ATPase                       | 0,0000         | 4,2616    |
| P30566                                                        | Adenylosuccinate lyase                                          | 0,0007         | 4,2306    |
| P13804                                                        | Electron transfer flavoprotein subunit alpha, mitochondrial     | 0,0000         | 4,0450    |
| P19971                                                        | Thymidine phosphorylase                                         | 0,0006         | 3,9674    |
| P40199                                                        | Carcinoembryonic antigen-related cell adhesion molecule 6       | 0,0433         | 3,9420    |
| O00299                                                        | Chloride intracellular channel protein 1                        | 0,0006         | 3,9351    |
| P07741                                                        | Adenine phosphoribosyltransferase                               | 0,0219         | 3,7614    |
| P69905                                                        | Hemoglobin subunit alpha                                        | 0,0146         | 3,6070    |
| P05089                                                        | Arginase-1 OS=Homo sapiens                                      | 0,0134         | 3,5286    |
| P17612                                                        | cAMP-dependent protein kinase catalytic subunit alpha           | 0,0112         | 3,4230    |
| P35908                                                        | Keratin, type II cytoskeletal 2 epidermal                       | 0,0106         | 3,4012    |
| Q92882                                                        | Osteoclast-stimulating factor 1                                 | 0,0245         | 3,3752    |
| P00488                                                        | Coagulation factor XIII A chain                                 | 0,0121         | 3,3421    |
| P09493                                                        | Tropomyosin alpha-1 chain                                       | 0,0007         | 3,3362    |
| P11177                                                        | Pyruvate dehydrogenase E1 component subunit beta, mitochondrial | 0,0003         | 3,3274    |
| P60709                                                        | Actin, cytoplasmic 1                                            | 0,0002         | 3,3227    |
| P35527                                                        | Keratin, type I cytoskeletal 9                                  | 0,0111         | 3,3122    |
| Q06323                                                        | Proteasome activator complex subunit 1                          | 0,0021         | 3,2949    |
| P25705                                                        | ATP synthase subunit alpha, mitochondrial                       | 0,0002         | 3,2681    |
| P31948                                                        | Stress-induced-phosphoprotein 1                                 | 0,0332         | 3,2562    |
| O15143                                                        | Actin-related protein 2/3 complex subunit 1B                    | 0,0333         | 3,1931    |
| P36871                                                        | Phosphoglucomutase-1                                            | 0,0010         | 3,0452    |
| P04264                                                        | Keratin, type II cytoskeletal 1 OS=Homo sapiens                 | 0,0439         | 3,0298    |
| P38606                                                        | V-type proton ATPase catalytic subunit A                        | 0,0014         | 2,9531    |

|        |                                                                  |        |        |
|--------|------------------------------------------------------------------|--------|--------|
| P29401 | Transketolase                                                    | 0,0453 | 2,9138 |
| Q5VTE0 | Putative elongation factor 1-alpha-like 3                        | 0,0017 | 2,8852 |
| Q7L5Y6 | DET1 homolog                                                     | 0,0387 | 2,8429 |
| P60981 | Destrin                                                          | 0,0126 | 2,7749 |
| P61160 | Actin-related protein 2                                          | 0,0126 | 2,7716 |
| P68036 | Ubiquitin-conjugating enzyme E2 L3                               | 0,0011 | 2,7056 |
| P02652 | Apolipoprotein A-II                                              | 0,0362 | 2,7056 |
| P61604 | 10 kDa heat shock protein, mitochondrial                         | 0,0005 | 2,6459 |
| P17931 | Galectin-3                                                       | 0,0223 | 2,5621 |
| P11413 | Glucose-6-phosphate 1-dehydrogenase                              | 0,0436 | 2,5312 |
| Q16181 | Septin-7                                                         | 0,0060 | 2,5013 |
| P04075 | Fructose-bisphosphate aldolase A                                 | 0,0022 | 2,4924 |
| Q15833 | Syntaxin-binding protein 2                                       | 0,0036 | 2,4736 |
| O15511 | Actin-related protein 2/3 complex subunit 5                      | 0,0021 | 2,4691 |
| Q96QK1 | Vacuolar protein sorting-associated protein 35                   | 0,0221 | 2,4674 |
| P02538 | Keratin, type II cytoskeletal 6A                                 | 0,0394 | 2,2979 |
| P55786 | Puromycin-sensitive aminopeptidase                               | 0,0404 | 2,2783 |
| Q00013 | 55 kDa erythrocyte membrane protein                              | 0,0082 | 2,2653 |
| P08571 | Monocyte differentiation antigen CD14                            | 0,0425 | 2,2551 |
| P30044 | Peroxiredoxin-5, mitochondrial                                   | 0,0250 | 2,2293 |
| P35612 | Beta-adducin                                                     | 0,0446 | 2,2199 |
| Q15366 | Poly(rC)-binding protein 2                                       | 0,0314 | 2,1815 |
| P67936 | Tropomyosin alpha-4 chain                                        | 0,0291 | 2,1731 |
| P09525 | Annexin A4                                                       | 0,0017 | 2,1524 |
| P02766 | Transthyretin                                                    | 0,0349 | 2,0798 |
| P50552 | Vasodilator-stimulated phosphoprotein                            | 0,0018 | 2,0793 |
| P06576 | ATP synthase subunit beta, mitochondrial                         | 0,0005 | 2,0450 |
| P08133 | Annexin A6                                                       | 0,0057 | 2,0414 |
| Q16762 | Thiosulfate sulfurtransferase                                    | 0,0145 | 2,0310 |
| P61978 | Heterogeneous nuclear ribonucleoprotein K                        | 0,0046 | 1,9658 |
| O15145 | Actin-related protein 2/3 complex subunit 3                      | 0,0355 | 1,9633 |
| Q99798 | Aconitate hydratase, mitochondrial                               | 0,0010 | 1,9608 |
| P01860 | Immunoglobulin heavy constant gamma 3                            | 0,0162 | 1,9486 |
| P02533 | Keratin, type I cytoskeletal 14                                  | 0,0475 | 1,9281 |
| P30086 | Phosphatidylethanolamine-binding protein                         | 0,0357 | 1,8783 |
| Q14697 | Neutral alpha-glucosidase AB                                     | 0,0060 | 1,8336 |
| Q9H2U2 | Inorganic pyrophosphatase 2, mitochondrial                       | 0,0006 | 1,8073 |
| P30101 | Protein disulfide-isomerase A3                                   | 0,0254 | 1,7864 |
| Q99439 | Calponin-2                                                       | 0,0175 | 1,7689 |
| P62136 | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit | 0,0012 | 1,7576 |
| P00505 | Aspartate aminotransferase, mitochondrial                        | 0,0139 | 1,7565 |
| P30040 | Endoplasmic reticulum resident protein 29                        | 0,0135 | 1,7389 |
| P09651 | Heterogeneous nuclear ribonucleoprotein A1                       | 0,0379 | 1,7249 |
| P30049 | ATP synthase subunit delta, mitochondrial                        | 0,0068 | 1,6931 |
| O75083 | WD repeat-containing protein 1                                   | 0,0440 | 1,6445 |
| Q13813 | Spectrin alpha chain, non-erythrocytic 1                         | 0,0301 | 1,6070 |
| Q13492 | Phosphatidylinositol-binding clathrin assembly protein           | 0,0096 | 1,5878 |
| P40926 | Malate dehydrogenase, mitochondrial                              | 0,0049 | 1,4994 |
| O75390 | Citrate synthase, mitochondrial                                  | 0,0118 | 1,4719 |

| Upregulated Proteins in Untreated, Compared in Control |                                                                            |         |        |
|--------------------------------------------------------|----------------------------------------------------------------------------|---------|--------|
| Protein                                                | Group                                                                      | p-Value | FC     |
| O14773                                                 | Tripeptidyl-peptidase 1                                                    | 0,0362  | 1,4441 |
| Q15084                                                 | Protein disulfide-isomerase A6                                             | 0,0251  | 1,4635 |
| P08567                                                 | Pleckstrin                                                                 | 0,0376  | 1,4669 |
| P20338                                                 | Ras-related protein Rab-4A                                                 | 0,0195  | 1,5322 |
| P62258                                                 | 14-3-3 protein epsilon                                                     | 0,0110  | 1,5330 |
| P63104                                                 | 14-3-3 protein zeta/delta                                                  | 0,0160  | 1,5440 |
| Q8NBS9                                                 | Thioredoxin domain-containing protein 5                                    | 0,0446  | 1,5722 |
| P04839                                                 | Cytochrome b-245 heavy chain                                               | 0,0475  | 1,5946 |
| P61981                                                 | 14-3-3 protein gamma                                                       | 0,0085  | 1,6066 |
| Q9HDC9                                                 | Adipocyte plasma membrane-associated protein                               | 0,0235  | 1,6150 |
| P61769                                                 | Beta-2-microglobulin                                                       | 0,0439  | 1,6224 |
| Q9UFN0                                                 | Protein NipSnap homolog 3 <sup>a</sup>                                     | 0,0224  | 1,6409 |
| P05106                                                 | Integrin beta-3                                                            | 0,0341  | 1,6777 |
| P54578                                                 | Ubiquitin carboxyl-terminal hydrolase 14                                   | 0,0446  | 1,6928 |
| P54108                                                 | Cysteine-rich secretory protein 3                                          | 0,0392  | 1,7124 |
| P24557                                                 | Thromboxane-A synthase                                                     | 0,0274  | 1,7477 |
| P21333                                                 | Filamin-A                                                                  | 0,0365  | 1,7481 |
| Q99623                                                 | Prohibitin-2                                                               | 0,0165  | 1,7628 |
| O94919                                                 | Endonuclease domain-containing 1 protein                                   | 0,0432  | 1,7709 |
| P20061                                                 | Transcobalamin-1                                                           | 0,0364  | 1,7894 |
| P04844                                                 | Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 2   | 0,0017  | 1,8642 |
| P30405                                                 | Peptidyl-prolyl cis-trans isomerase F, mitochondrial                       | 0,0237  | 1,8656 |
| P23229                                                 | Integrin alpha-6                                                           | 0,0295  | 1,8854 |
| P80188                                                 | Neutrophil gelatinase-associated lipocalin                                 | 0,0401  | 1,9830 |
| P21926                                                 | CD9 antigen                                                                | 0,0160  | 1,9864 |
| Q9NQC3                                                 | Reticulon-4                                                                | 0,0221  | 1,9867 |
| P11234                                                 | Ras-related protein Ral-B                                                  | 0,0252  | 2,0040 |
| P24158                                                 | Myeloblastin                                                               | 0,0269  | 2,0115 |
| P07996                                                 | Thrombospondin-1                                                           | 0,0014  | 2,0331 |
| Q96P48                                                 | Arf-GAP with Rho-GAP domain, ANK repeat and PH domain-containing protein 1 | 0,0092  | 2,0360 |
| P50990                                                 | T-complex protein 1 subunit theta                                          | 0,0170  | 2,0416 |
| Q6UX71                                                 | Plexin domain-containing protein 2                                         | 0,0144  | 2,0905 |
| P16109                                                 | P-selectin                                                                 | 0,0134  | 2,1039 |
| Q55Q64                                                 | Lymphocyte antigen 6 complex locus protein G6f                             | 0,0161  | 2,1107 |
| P62318                                                 | Small nuclear ribonucleoprotein Sm D3                                      | 0,0488  | 2,1112 |
| Q13231                                                 | Chitotriosidase-1                                                          | 0,0058  | 2,1411 |
| Q14165                                                 | Malectin                                                                   | 0,0147  | 2,1586 |
| P35579                                                 | Myosin-9                                                                   | 0,0084  | 2,1873 |
| P51659                                                 | Peroxisomal multifunctional enzyme type 2                                  | 0,0015  | 2,2355 |
| Q00325                                                 | Phosphate carrier protein, mitochondrial                                   | 0,0096  | 2,2758 |
| P01137                                                 | Transforming growth factor beta-1 proprotein                               | 0,0030  | 2,3360 |
| P62314                                                 | Small nuclear ribonucleoprotein Sm D1                                      | 0,0015  | 2,3589 |
| P12724                                                 | Eosinophil cationic protein                                                | 0,0012  | 2,4191 |

|        |                                              |        |         |
|--------|----------------------------------------------|--------|---------|
| P02774 | Vitamin D-binding protein                    | 0,0439 | 2,4327  |
| P00387 | NADH-cytochrome b5 reductase 3               | 0,0015 | 2,4463  |
| P12838 | Neutrophil defensin 4                        | 0,0091 | 2,4608  |
| Q9BSJ8 | Extended synaptotagmin-1                     | 0,0004 | 2,4649  |
| Q9Y6C2 | EMILIN-1                                     | 0,0147 | 2,4765  |
| Q9H4B7 | Tubulin beta-1 chain                         | 0,0344 | 2,6765  |
| P61224 | Ras-related protein Rap-1b                   | 0,0006 | 2,8033  |
| Q6UX06 | Olfactomedin-4                               | 0,0139 | 2,8132  |
| P08246 | Neutrophil elastase                          | 0,0316 | 2,9474  |
| Q8TC12 | Retinol dehydrogenase 11                     | 0,0422 | 3,0610  |
| P14780 | Matrix metalloproteinase-9                   | 0,0104 | 3,1051  |
| P02775 | Platelet basic protein                       | 0,0026 | 3,1669  |
| P41218 | Myeloid cell nuclear differentiation antigen | 0,0203 | 3,2656  |
| P00747 | Plasminogen                                  | 0,0232 | 3,3382  |
| P17213 | Bactericidal permeability-increasing protein | 0,0423 | 3,3966  |
| P41240 | Tyrosine-protein kinase CSK                  | 0,0013 | 3,4288  |
| P23219 | Prostaglandin G/H synthase 1                 | 0,0005 | 3,6929  |
| Q8NBM8 | Prenylcysteine oxidase-like                  | 0,0002 | 3,8514  |
| P02776 | Platelet factor 4                            | 0,0011 | 3,9596  |
| P04004 | Vitronectin                                  | 0,0305 | 4,0358  |
| Q8WWA1 | Transmembrane protein 40                     | 0,0006 | 4,9507  |
| P02749 | Beta-2-glycoprotein 1                        | 0,0240 | 5,3740  |
| P05164 | Myeloperoxidase                              | 0,0038 | 5,5110  |
| P20160 | Azurocidin                                   | 0,0066 | 7,2103  |
| P02788 | Lactotransferrin                             | 0,0009 | 7,6776  |
| Q6DRA6 | Putative histone H2B type 2-D                | 0,0040 | 8,3208  |
| Q9BTM1 | Histone H2A.J                                | 0,0138 | 8,8293  |
| P59666 | Neutrophil defensin 3                        | 0,0095 | 8,9484  |
| Q99879 | Histone H2B type 1-M                         | 0,0060 | 9,9891  |
| P62805 | Histone H4                                   | 0,0079 | 12,0044 |

#### Upregulated Proteins in Untreated, Compared in ERT-a

| Protein    | Group                                                                    | p-Value | FC      |
|------------|--------------------------------------------------------------------------|---------|---------|
| A0A075B6S5 | Immunoglobulin kappa variable 1-27                                       | 0,0096  | 17,9362 |
| P59666     | Neutrophil defensin 3                                                    | 0,0431  | 3,7253  |
| P23141     | Liver carboxylesterase 1                                                 | 0,0013  | 3,2258  |
| P04196     | Histidine-rich glycoprotein                                              | 0,0322  | 2,5794  |
| Q00325     | Phosphate carrier protein, mitochondrial                                 | 0,0124  | 2,5252  |
| Q6UX06     | Olfactomedin-4                                                           | 0,0283  | 2,4717  |
| P12838     | Neutrophil defensin 4                                                    | 0,0204  | 2,3711  |
| P02788     | Lactotransferrin                                                         | 0,0388  | 2,2862  |
| P40306     | Proteasome subunit beta type-10                                          | 0,0135  | 2,2613  |
| Q99623     | Prohibitin-2                                                             | 0,0100  | 2,1771  |
| P20338     | Ras-related protein Rab-4A                                               | 0,0038  | 2,1434  |
| Q13231     | Chitotriosidase-1                                                        | 0,0219  | 2,0308  |
| P00367     | Glutamate dehydrogenase 1, mitochondrial                                 | 0,0151  | 2,0051  |
| P36222     | Chitinase-3-like protein 1                                               | 0,0209  | 1,9798  |
| P62314     | Small nuclear ribonucleoprotein Sm D1                                    | 0,0130  | 1,9495  |
| P04843     | Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1 | 0,0394  | 1,9426  |

|        |                                                                            |        |        |
|--------|----------------------------------------------------------------------------|--------|--------|
| P00492 | Hypoxanthine-guanine phosphoribosyltransferase                             | 0,0310 | 1,9243 |
| Q96P48 | Arf-GAP with Rho-GAP domain, ANK repeat and PH domain-containing protein 1 | 0,0227 | 1,8559 |
| P00387 | NADH-cytochrome b5 reductase 3                                             | 0,0275 | 1,7933 |
| P54108 | Cysteine-rich secretory protein 3                                          | 0,0355 | 1,7709 |
| P57088 | Transmembrane protein 33                                                   | 0,0237 | 1,7296 |
| P30048 | Thioredoxin-dependent peroxide reductase, mitochondrial                    | 0,0259 | 1,5081 |

#### Upregulated Proteins in ERT-a, Compared in Untreated

| Protein | Group                                          | p-Value | FC     |
|---------|------------------------------------------------|---------|--------|
| P04075  | Fructose-bisphosphate aldolase A               | 0,0472  | 1,4848 |
| Q13813  | Spectrin alpha chain, non-erythrocytic 1       | 0,0188  | 1,5269 |
| P00338  | L-lactate dehydrogenase A chain                | 0,0305  | 1,6499 |
| P68036  | Ubiquitin-conjugating enzyme E2 L3             | 0,0339  | 1,7144 |
| Q96AG4  | Leucine-rich repeat-containing protein 59      | 0,0005  | 1,7575 |
| P30101  | Protein disulfide-isomerase A3                 | 0,0216  | 1,8021 |
| O00299  | Chloride intracellular channel protein 1       | 0,0302  | 1,8891 |
| Q99439  | Calponin-2                                     | 0,0156  | 2,1441 |
| Q12913  | Receptor-type tyrosine-protein phosphatase eta | 0,0015  | 2,2441 |
| P10153  | Non-secretory ribonuclease                     | 0,0293  | 2,4845 |

#### Upregulated Proteins in Untreated, Compared in ERT-b

| Protein | Group                                                          | p-Value | FC     |
|---------|----------------------------------------------------------------|---------|--------|
| P04004  | Vitronectin                                                    | 0,0458  | 4,1505 |
| P49748  | Very long-chain specific acyl-CoA dehydrogenase, mitochondrial | 0,0473  | 3,9345 |
| P41240  | Tyrosine-protein kinase CSK                                    | 0,0021  | 3,5935 |
| P00367  | Glutamate dehydrogenase 1, mitochondrial                       | 0,0110  | 2,0881 |
| P32119  | Peroxisomal protein 2                                          | 0,0318  | 1,7739 |
| P23141  | Liver carboxylesterase 1                                       | 0,0479  | 1,7552 |
| P47755  | F-actin-capping protein subunit alpha-2                        | 0,0400  | 1,7545 |
| Q02218  | 2-oxoglutarate dehydrogenase, mitochondrial                    | 0,0242  | 1,6811 |
| P30048  | Thioredoxin-dependent peroxide reductase, mitochondrial        | 0,0255  | 1,5177 |
| P11310  | Medium-chain specific acyl-CoA dehydrogenase, mitochondrial    | 0,0186  | 1,4789 |

#### Upregulated Proteins in ERT-b, Compared in Untreated

| Protein | Group                                     | p-Value | FC     |
|---------|-------------------------------------------|---------|--------|
| Q06323  | Proteasome activator complex subunit 1    | 0,0500  | 1,4306 |
| P04075  | Fructose-bisphosphate aldolase A          | 0,0220  | 1,5273 |
| P31146  | Coronin-1A                                | 0,0195  | 1,5744 |
| P06737  | Glycogen phosphorylase, liver form        | 0,0114  | 1,7951 |
| P27695  | DNA-(apurinic or apyrimidinic site) lyase | 0,0281  | 1,8630 |
| P00338  | L-lactate dehydrogenase A chain           | 0,0108  | 1,8679 |
| P02042  | Hemoglobin subunit delta                  | 0,0138  | 1,8726 |

|        |                                                   |        |        |
|--------|---------------------------------------------------|--------|--------|
| P68871 | Hemoglobin subunit beta                           | 0,0251 | 1,8887 |
| P00558 | Phosphoglycerate kinase 1                         | 0,0456 | 1,9304 |
| P52209 | 6-phosphogluconate dehydrogenase, decarboxylating | 0,0130 | 1,9527 |
| P19971 | Thymidine phosphorylase                           | 0,0358 | 1,9770 |
| P08133 | Annexin A6                                        | 0,0337 | 1,9848 |
| P06744 | Glucose-6-phosphate isomerase                     | 0,0111 | 2,0416 |
| P30101 | Protein disulfide-isomerase A3                    | 0,0295 | 2,1057 |
| O43684 | Mitotic checkpoint protein BUB3                   | 0,0120 | 2,1731 |
| P26038 | Moesin                                            | 0,0338 | 2,2219 |
| P14618 | Pyruvate kinase PKM                               | 0,0351 | 2,2541 |
| O00299 | Chloride intracellular channel protein 1          | 0,0157 | 2,4014 |
| Q9Y2Y8 | Proteoglycan 3                                    | 0,0116 | 2,6604 |
| P26583 | High mobility group protein B2                    | 0,0150 | 3,3444 |
| P04083 | Annexin A1                                        | 0,0155 | 3,3598 |
| P11678 | Eosinophil peroxidase                             | 0,0266 | 3,4018 |
| P10153 | Non-secretory ribonuclease                        | 6,1420 | 6,1420 |

#### Upregulated Proteins in ERT-a, Compared in ERT-b

| Protein | Group                                          | p-Value | FC     |
|---------|------------------------------------------------|---------|--------|
| Q9HCN6  | Platelet glycoprotein VI                       | 0,0141  | 2,1295 |
| P22626  | Heterogeneous nuclear ribonucleoproteins A2/B1 | 0,0478  | 1,7615 |
| O75695  | Protein XRP2                                   | 0,0426  | 1,3579 |
| P62258  | 14-3-3 protein epsilon                         | 0,0047  | 1,2943 |

#### Upregulated proteins in ERT-b, compared in ERT-a

| Protein | Group                                                                    | p-Value | FC     |
|---------|--------------------------------------------------------------------------|---------|--------|
| P06737  | Glycogen phosphorylase, liver form                                       | 0,0429  | 1,4528 |
| Q99798  | Aconitate hydratase, mitochondrial                                       | 0,0319  | 1,6310 |
| P50991  | T-complex protein 1 subunit delta                                        | 0,0368  | 1,6979 |
| O60496  | Docking protein 2                                                        | 0,0196  | 1,8275 |
| P19971  | Thymidine phosphorylase                                                  | 0,0466  | 1,8415 |
| P78371  | T-complex protein 1 subunit beta                                         | 0,0495  | 1,8571 |
| Q9NUJ1  | Mycophenolic acid acyl-glucuronide esterase, mitochondrial               | 0,0353  | 1,9314 |
| P04843  | Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1 | 0,0267  | 1,9449 |
| P55072  | Transitional endoplasmic reticulum ATPase                                | 0,0493  | 1,9786 |
| P20338  | Ras-related protein Rab-4A                                               | 0,0299  | 2,0159 |
| Q9NZN3  | EH domain-containing protein 3                                           | 0,0321  | 2,0804 |
| P41218  | Myeloid cell nuclear differentiation antigen                             | 0,0374  | 2,3092 |

#### Upregulated Proteins in Control, Compared in ERT-a

| Protein | Group                                    | p-Value | FC      |
|---------|------------------------------------------|---------|---------|
| P04406  | Glyceraldehyde-3-phosphate dehydrogenase | 0,0009  | 13,7240 |
| P14618  | Pyruvate kinase PKM                      | 0,0171  | 12,9919 |
| P00338  | L-lactate dehydrogenase A chain          | 0,0066  | 9,6288  |
| P00558  | Phosphoglycerate kinase 1                | 0,0120  | 8,8984  |
| P62826  | GTP-binding nuclear protein Ran          | 0,0213  | 8,4856  |

|        |                                                                  |        |        |
|--------|------------------------------------------------------------------|--------|--------|
| P26038 | Moesin                                                           | 0,0042 | 7,7890 |
| P30566 | Adenylosuccinate lyase                                           | 0,0003 | 7,3462 |
| P31146 | Coronin-1A                                                       | 0,0463 | 7,0536 |
| P06737 | Glycogen phosphorylase, liver form                               | 0,0052 | 6,9374 |
| P13804 | Electron transfer flavoprotein subunit alpha, mitochondrial      | 0,0000 | 6,3910 |
| P55072 | Transitional endoplasmic reticulum ATPase                        | 0,0000 | 5,0585 |
| P07195 | L-lactate dehydrogenase B chain                                  | 0,0004 | 4,8799 |
| P60709 | Actin, cytoplasmic 1                                             | 0,0001 | 4,6201 |
| Q16181 | Septin-7                                                         | 0,0021 | 3,9887 |
| P07741 | Adenine phosphoribosyltransferase                                | 0,0311 | 3,9742 |
| P11177 | Pyruvate dehydrogenase E1 component subunit beta, mitochondrial  | 0,0001 | 3,9682 |
| P36871 | Phosphoglucomutase-1                                             | 0,0009 | 3,9615 |
| P19971 | Thymidine phosphorylase                                          | 0,0014 | 3,6955 |
| P60981 | Destrin                                                          | 0,0095 | 3,6291 |
| P25705 | ATP synthase subunit alpha, mitochondrial                        | 0,0006 | 3,6018 |
| P17612 | cAMP-dependent protein kinase catalytic subunit alpha            | 0,0174 | 3,5329 |
| P16402 | Histone H1.3                                                     | 0,0269 | 3,4692 |
| P02652 | Apolipoprotein A-II                                              | 0,0325 | 3,3625 |
| P00488 | Coagulation factor XIII A chain                                  | 0,0176 | 3,2396 |
| Q15366 | Poly(rC)-binding protein 2                                       | 0,0199 | 3,0474 |
| P61160 | Actin-related protein 2                                          | 0,0195 | 3,0163 |
| P19827 | Inter-alpha-trypsin inhibitor heavy chain H1                     | 0,0242 | 2,9278 |
| Q96QK1 | Vacuolar protein sorting-associated protein 35                   | 0,0205 | 2,8957 |
| P61604 | 10 kDa heat shock protein, mitochondrial                         | 0,0046 | 2,8276 |
| P08571 | Monocyte differentiation antigen CD14                            | 0,0328 | 2,7823 |
| Q96HE7 | ERO1-like protein alpha                                          | 0,0469 | 2,7661 |
| P61158 | Actin-related protein 3                                          | 0,0414 | 2,7378 |
| Q5VTE0 | Putative elongation factor 1-alpha-like 3                        | 0,0061 | 2,7129 |
| P62937 | Peptidyl-prolyl cis-trans isomerase A                            | 0,0289 | 2,7129 |
| P49748 | Very long-chain specific acyl-CoA dehydrogenase, mitochondrial   | 0,0065 | 2,6313 |
| P48735 | Isocitrate dehydrogenase [NADP], mitochondrial                   | 0,0036 | 2,5708 |
| P38606 | V-type proton ATPase catalytic subunit A                         | 0,0076 | 2,4614 |
| P80511 | Protein S100-A12                                                 | 0,0098 | 2,4223 |
| Q99798 | Aconitate hydratase, mitochondrial                               | 0,0006 | 2,4216 |
| P02766 | Transthyretin                                                    | 0,0362 | 2,4000 |
| P00505 | Aspartate aminotransferase, mitochondrial                        | 0,0008 | 2,3502 |
| Q00013 | 55 kDa erythrocyte membrane protein                              | 0,0169 | 2,3394 |
| Q14697 | Neutral alpha-glucosidase AB                                     | 0,0022 | 2,2915 |
| O15145 | Actin-related protein 2/3 complex subunit 3                      | 0,0307 | 2,2323 |
| P62136 | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit | 0,0088 | 2,1843 |
| P10809 | 60 kDa heat shock protein, mitochondrial                         | 0,0063 | 2,1241 |
| O00299 | Chloride intracellular channel protein 1                         | 0,0132 | 2,0831 |
| P01860 | Immunoglobulin heavy constant gamma 3                            | 0,0137 | 2,0003 |
| O75083 | WD repeat-containing protein 1                                   | 0,0172 | 1,9767 |
| O15511 | Actin-related protein 2/3 complex subunit 5                      | 0,0164 | 1,9209 |

|        |                                                                 |        |        |
|--------|-----------------------------------------------------------------|--------|--------|
| P48059 | LIM and senescent cell antigen-like-containing domain protein 1 | 0,0383 | 1,9081 |
| P01019 | Angiotensinogen                                                 | 0,0287 | 1,8872 |
| Q15833 | Syntaxin-binding protein 2                                      | 0,0118 | 1,8581 |
| P40926 | Malate dehydrogenase, mitochondrial                             | 0,0014 | 1,8529 |
| P00367 | Glutamate dehydrogenase 1, mitochondrial                        | 0,0250 | 1,8473 |
| Q9NUJ1 | Mycophenolic acid acyl-glucuronide esterase, mitochondrial      | 0,0432 | 1,8335 |
| P61978 | Heterogeneous nuclear ribonucleoprotein K                       | 0,0109 | 1,7219 |
| O75390 | Citrate synthase, mitochondrial                                 | 0,0038 | 1,7114 |
| P04075 | Fructose-bisphosphate aldolase A                                | 0,0284 | 1,6786 |
| Q96C19 | EF-hand domain-containing protein D2                            | 0,0333 | 1,6613 |
| P05107 | Integrin beta-2                                                 | 0,0229 | 1,5884 |
| P09622 | Dihydrolipoyl dehydrogenase, mitochondrial                      | 0,0158 | 1,5506 |
| Q9H2U2 | Inorganic pyrophosphatase 2, mitochondrial                      | 0,0159 | 1,5000 |
| Q86UX7 | Fermitin family homolog 3                                       | 0,0271 | 1,4976 |

| Upregulated Proteins in ERT-a, Compared in Control |                                                                          |         |        |
|----------------------------------------------------|--------------------------------------------------------------------------|---------|--------|
| Protein                                            | Group                                                                    | p-Value | FC     |
| P31946                                             | 14-3-3 protein beta/alpha                                                | 0,0125  | 1,3313 |
| P04844                                             | Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 2 | 0,0465  | 1,3673 |
| Q6EEV6                                             | Small ubiquitin-related modifier 4                                       | 0,0135  | 1,3945 |
| Q15084                                             | Protein disulfide-isomerase A6                                           | 0,0085  | 1,4089 |
| P27348                                             | 14-3-3 protein theta                                                     | 0,0028  | 1,4761 |
| P19105                                             | c regulatory light chain 12A                                             | 0,0149  | 1,4931 |
| P61981                                             | 14-3-3 protein gamma                                                     | 0,0065  | 1,5160 |
| Q8NBS9                                             | Thioredoxin domain-containing protein 5                                  | 0,0291  | 1,5313 |
| P04179                                             | Superoxide dismutase [Mn], mitochondrial                                 | 0,0012  | 1,5424 |
| Q15907                                             | Ras-related protein Rab-11B                                              | 0,0056  | 1,5674 |
| P05106                                             | Integrin beta-3                                                          | 0,0160  | 1,5714 |
| P05556                                             | Integrin beta-1                                                          | 0,0052  | 1,5743 |
| P62258                                             | 14-3-3 protein epsilon                                                   | 0,0000  | 1,5830 |
| O95866                                             | Megakaryocyte and platelet inhibitory receptor G6b                       | 0,0208  | 1,7089 |
| P40197                                             | Platelet glycoprotein V                                                  | 0,0080  | 1,7398 |
| P14780                                             | Matrix metalloproteinase-9                                               | 0,0303  | 1,7510 |
| Q9HCN6                                             | Platelet glycoprotein VI                                                 | 0,0181  | 1,7887 |
| P11234                                             | Ras-related protein Ral-B                                                | 0,0062  | 1,7917 |
| P51659                                             | Peroxisomal multifunctional enzyme type 2                                | 0,0002  | 1,8388 |
| Q9BSJ8                                             | Extended synaptotagmin-1                                                 | 0,0064  | 1,9004 |
| P63104                                             | 14-3-3 protein zeta/delta                                                | 0,0000  | 1,9036 |
| P30405                                             | Peptidyl-prolyl cis-trans isomerase F, mitochondrial                     | 0,0035  | 1,9106 |
| P54578                                             | Ubiquitin carboxyl-terminal hydrolase 14                                 | 0,0138  | 1,9124 |
| P07996                                             | Thrombospondin-1                                                         | 0,0174  | 1,9446 |
| P21926                                             | CD9 antigen                                                              | 0,0016  | 1,9703 |
| Q14165                                             | Malectin                                                                 | 0,0003  | 1,9806 |
| Q6UX71                                             | Plexin domain-containing protein 2                                       | 0,0048  | 2,0308 |
| P23229                                             | Integrin alpha-6                                                         | 0,0240  | 2,0577 |
| O94919                                             | Endonuclease domain-containing 1 protein                                 | 0,0005  | 2,1525 |



|        |                                              |        |        |
|--------|----------------------------------------------|--------|--------|
| P10909 | Clusterin                                    | 0,0421 | 2,2597 |
| P07359 | Platelet glycoprotein Ib alpha chain         | 0,0000 | 2,2665 |
| P61224 | Ras-related protein Rap-1b                   | 0,0005 | 2,3011 |
| P23219 | Prostaglandin G/H synthase 1                 | 0,0111 | 2,3568 |
| P21333 | Filamin-A                                    | 0,0010 | 2,3744 |
| P01137 | Transforming growth factor beta-1 proprotein | 0,0000 | 2,3934 |
| P59666 | Neutrophil defensin 3                        | 0,0390 | 2,4021 |
| P12724 | Eosinophil cationic protein                  | 0,0193 | 2,4820 |
| Q9Y490 | Talin-1                                      | 0,0017 | 2,5597 |
| Q0ZGT2 | Nexilin                                      | 0,0256 | 2,5845 |
| P16109 | P-selectin                                   | 0,0010 | 2,6412 |
| P05164 | Myeloperoxidase                              | 0,0266 | 2,7387 |
| Q8NF91 | Nesprin-1                                    | 0,0404 | 2,7787 |
| Q9Y6C2 | EMILIN-1                                     | 0,0004 | 2,8579 |
| P02775 | Platelet basic protein                       | 0,0012 | 2,8929 |
| P02776 | Platelet factor 4                            | 0,0081 | 2,8998 |
| P10153 | Non-secretory ribonuclease                   | 0,0340 | 3,0428 |
| Q8WWA1 | Transmembrane protein 40                     | 0,0266 | 3,1491 |
| P02788 | Lactotransferrin                             | 0,0351 | 3,3583 |
| P20160 | Azurocidin                                   | 0,0362 | 3,5203 |
| Q6DRA6 | Putative histone H2B type 2-D                | 0,0149 | 3,5913 |
| Q9BTM1 | Histone H2A.J                                | 0,0201 | 3,8062 |
| P62805 | Histone H4                                   | 0,0217 | 3,8947 |
| Q8NBM8 | Prenylcysteine oxidase-like                  | 0,0038 | 4,1117 |
| P13501 | C-C motif chemokine 5                        | 0,0107 | 4,6645 |
| Q99879 | Histone H2B type 1-M                         | 0,0221 | 4,7259 |

| Upregulated Proteins in Control Group, Compared in ERT-b |                                                                 |         |         |
|----------------------------------------------------------|-----------------------------------------------------------------|---------|---------|
| Protein                                                  | Group                                                           | p-Value | FC      |
| P04406                                                   | Glyceraldehyde-3-phosphate dehydrogenase                        | 0,0008  | 15,8202 |
| P00338                                                   | L-lactate dehydrogenase A chain                                 | 0,0072  | 8,5049  |
| P14618                                                   | Pyruvate kinase PKM                                             | 0,0217  | 8,2673  |
| P13804                                                   | Electron transfer flavoprotein subunit alpha, mitochondrial     | 0,0000  | 6,4835  |
| P00558                                                   | Phosphoglycerate kinase 1                                       | 0,0176  | 5,7420  |
| P49748                                                   | Very long-chain specific acyl-CoA dehydrogenase, mitochondrial  | 0,0017  | 5,0070  |
| P06737                                                   | Glycogen phosphorylase, liver form                              | 0,0082  | 4,7752  |
| Q9NTK5                                                   | Obg-like ATPase 1                                               | 0,0228  | 4,5744  |
| P16402                                                   | Histone H1.3                                                    | 0,0071  | 4,3911  |
| P07195                                                   | L-lactate dehydrogenase B chain                                 | 0,0004  | 4,2405  |
| P60709                                                   | Actin, cytoplasmic 1                                            | 0,0002  | 3,9994  |
| P23528                                                   | Cofilin-1                                                       | 0,0313  | 3,6348  |
| P26038                                                   | Moesin                                                          | 0,0143  | 3,5113  |
| P00488                                                   | Coagulation factor XIII A chain                                 | 0,0149  | 3,2860  |
| Q16181                                                   | Septin-7                                                        | 0,0078  | 3,2061  |
| P61604                                                   | 10 kDa heat shock protein, mitochondrial                        | 0,0007  | 3,1484  |
| P62937                                                   | Peptidyl-prolyl cis-trans isomerase A                           | 0,0199  | 3,1189  |
| P11177                                                   | Pyruvate dehydrogenase E1 component subunit beta, mitochondrial | 0,0006  | 3,0808  |

|        |                                                                  |        |        |
|--------|------------------------------------------------------------------|--------|--------|
| P48735 | Isocitrate dehydrogenase [NADP], mitochondrial                   | 0,0005 | 3,0282 |
| P38606 | V-type proton ATPase catalytic subunit A                         | 0,0028 | 2,9313 |
| P61160 | Actin-related protein 2                                          | 0,0278 | 2,8040 |
| P10809 | 60 kDa heat shock protein, mitochondrial                         | 0,0003 | 2,7833 |
| P68871 | Hemoglobin subunit beta                                          | 0,0242 | 2,5670 |
| P55072 | Transitional endoplasmic reticulum ATPase                        | 0,0003 | 2,5566 |
| P00505 | Aspartate aminotransferase, mitochondrial                        | 0,0005 | 2,5442 |
| Q5VTE0 | Putative elongation factor 1-alpha-like 3                        | 0,0140 | 2,3533 |
| P60981 | Destrin                                                          | 0,0360 | 2,3203 |
| Q06323 | Proteasome activator complex subunit 1                           | 0,0175 | 2,3031 |
| Q14697 | Neutral alpha-glucosidase AB                                     | 0,0018 | 2,1677 |
| P01860 | Immunoglobulin heavy constant gamma 3                            | 0,0334 | 2,0441 |
| O15511 | Actin-related protein 2/3 complex subunit 5                      | 0,0125 | 2,0411 |
| O75083 | WD repeat-containing protein 1                                   | 0,0092 | 2,0348 |
| P19971 | Thymidine phosphorylase                                          | 0,0195 | 2,0068 |
| P00367 | Glutamate dehydrogenase 1, mitochondrial                         | 0,0179 | 1,9237 |
| P25705 | ATP synthase subunit alpha, mitochondrial                        | 0,0423 | 1,9045 |
| P68036 | Ubiquitin-conjugating enzyme E2 L3                               | 0,0303 | 1,9032 |
| P62136 | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit | 0,0036 | 1,6805 |
| P04075 | Fructose-bisphosphate aldolase A                                 | 0,0303 | 1,6319 |
| Q15833 | Syntaxin-binding protein 2                                       | 0,0471 | 1,6273 |
| P30040 | Endoplasmic reticulum resident protein 29                        | 0,0238 | 1,6181 |
| P61978 | Heterogeneous nuclear ribonucleoprotein K                        | 0,0233 | 1,5864 |
| P40926 | Malate dehydrogenase, mitochondrial                              | 0,0097 | 1,5290 |
| P50552 | Vasodilator-stimulated phosphoprotein                            | 0,0374 | 1,5177 |
| O75390 | Citrate synthase, mitochondrial                                  | 0,0262 | 1,5068 |
| Q9NZ08 | Endoplasmic reticulum aminopeptidase 1                           | 0,0371 | 1,4936 |
| Q99798 | Aconitate hydratase, mitochondrial                               | 0,0364 | 1,4848 |
| Q06830 | Peroxiredoxin-1                                                  | 0,0207 | 1,4504 |
| Q9P0L0 | Vesicle-associated membrane protein-associated protein A         | 0,0302 | 1,3333 |
| P38646 | Stress-70 protein, mitochondrial                                 | 0,0469 | 1,3078 |

#### Upregulated Proteins in ERT-b, Compared in Control

| Protein | Group                                                 | p-Value | FC     |
|---------|-------------------------------------------------------|---------|--------|
| P62258  | 14-3-3 protein epsilon                                | 0,0487  | 1,2231 |
| Q15907  | Ras-related protein Rab-11B                           | 0,0097  | 1,4119 |
| P04179  | Superoxide dismutase [Mn], mitochondrial              | 0,0072  | 1,4411 |
| P62987  | Ubiquitin-60S ribosomal protein L40                   | 0,0438  | 1,4438 |
| P61981  | 14-3-3 protein gamma                                  | 0,0252  | 1,4442 |
| P30405  | Peptidyl-prolyl cis-trans isomerase F, mitochondrial  | 0,0414  | 1,4657 |
| P63104  | 14-3-3 protein zeta/delta                             | 0,0104  | 1,5148 |
| P50148  | Guanine nucleotide-binding protein G(q) subunit alpha | 0,0430  | 1,5767 |
| P08514  | Integrin alpha-IIb                                    | 0,0477  | 1,5841 |
| P50990  | T-complex protein 1 subunit theta                     | 0,0284  | 1,6454 |

|        |                                                    |        |        |
|--------|----------------------------------------------------|--------|--------|
| P51659 | Peroxisomal multifunctional enzyme type 2          | 0,0232 | 1,6741 |
| P05556 | Integrin beta-1                                    | 0,0403 | 1,7352 |
| P07359 | Platelet glycoprotein Ib alpha chain               | 0,0026 | 1,7877 |
| P11234 | Ras-related protein Ral-B                          | 0,0083 | 1,8574 |
| P05106 | Integrin beta-3                                    | 0,0076 | 1,8584 |
| Q9NQC3 | Reticulon-4                                        | 0,0123 | 1,8796 |
| P07996 | Thrombospondin-1                                   | 0,0048 | 1,8981 |
| P01137 | Transforming growth factor beta-1 proprotein       | 0,0008 | 1,8996 |
| Q6UX71 | Plexin domain-containing protein 2                 | 0,0108 | 1,9025 |
| O95866 | Megakaryocyte and platelet inhibitory receptor G6b | 0,0330 | 1,9063 |
| P00387 | NADH-cytochrome b5 reductase 3                     | 0,0341 | 1,9314 |
| O94919 | Endonuclease domain-containing 1 protein           | 0,0160 | 1,9710 |
| P61769 | Beta-2-microglobulin                               | 0,0118 | 1,9734 |
| P21926 | CD9 antigen                                        | 0,0102 | 1,9927 |
| P21333 | Filamin-A                                          | 0,0099 | 2,0047 |
| Q9BSJ8 | Extended synaptotagmin-1                           | 0,0183 | 2,0097 |
| Q9Y6C2 | EMILIN-1                                           | 0,0499 | 2,0530 |
| Q5SQ64 | Lymphocyte antigen 6 complex locus protein G6f     | 0,0008 | 2,0983 |
| Q14165 | Malectin                                           | 0,0175 | 2,2236 |
| P00747 | Plasminogen                                        | 0,0271 | 2,2546 |
| P61224 | Ras-related protein Rap-1b                         | 0,0007 | 2,3479 |
| P16109 | P-selectin                                         | 0,0127 | 2,5707 |
| Q9NTJ5 | Phosphatidylinositol-3-phosphatase SAC1            | 0,0291 | 2,6961 |
| P23229 | Integrin alpha-6                                   | 0,0046 | 2,7222 |
| P23219 | Prostaglandin G/H synthase 1                       | 0,0196 | 2,7377 |
| P17213 | Bactericidal permeability-increasing protein       | 0,0430 | 2,8220 |
| Q15149 | Plectin                                            | 0,0123 | 2,9715 |
| P02775 | Platelet basic protein                             | 0,0000 | 3,0305 |
| P02776 | Platelet factor 4                                  | 0,0027 | 3,0395 |
| P08246 | Neutrophil elastase                                | 0,0443 | 3,2181 |
| Q8NBM8 | Prenylcysteine oxidase-like                        | 0,0002 | 3,4635 |
| Q8TC12 | Retinol dehydrogenase 11                           | 0,0005 | 3,4661 |
| P08311 | Cathepsin G                                        | 0,0257 | 3,6636 |
| Q8WWA1 | Transmembrane protein 40                           | 0,0122 | 4,1250 |
| P05164 | Myeloperoxidase                                    | 0,0185 | 4,2816 |
| P12724 | Eosinophil cationic protein                        | 0,0027 | 4,3243 |
| P41218 | Myeloid cell nuclear differentiation antigen       | 0,0010 | 4,4056 |
| P02788 | Lactotransferrin                                   | 0,0208 | 5,3683 |
| P11678 | Eosinophil peroxidase                              | 0,0127 | 5,5128 |
| P62805 | Histone H4                                         | 0,0235 | 5,7115 |
| Q6DRA6 | Putative histone H2B type 2-D                      | 0,0033 | 6,1375 |
| P20160 | Azurocidin                                         | 0,0313 | 6,2332 |
| Q9BTM1 | Histone H2A.J                                      | 0,0029 | 6,5464 |
| Q99879 | Histone H2B type 1-M                               | 0,0017 | 6,8123 |

|        |                            |        |        |
|--------|----------------------------|--------|--------|
| P10153 | Non-secretory ribonuclease | 0,0402 | 7,5221 |
| P13501 | C-C motif chemokine 5      | 0,0000 | 8,0026 |

**Table S3.** P-Values of Downregulated proteins in untreated and ERT-treated MPS IVA patients (ERT-a, ERT-b) with respect to healthy controls.

| UniProt Code | p-Value-UG | FC      | 1/FC   | p-Value-ERT-a | FC      | 1/FC   | p-Value-ERT-b | FC       | 1/FC    |
|--------------|------------|---------|--------|---------------|---------|--------|---------------|----------|---------|
| P14618       | 0,00790    | 18,6354 | 0,0537 | 0,01711       | 12,9919 | 0,0770 | 0,02175       | 8,26727  | 0,12096 |
| P04406       | 0,00028    | 18,5390 | 0,0539 | 0,00092       | 13,7240 | 0,0729 | 0,00083       | 15,82022 | 0,06321 |
| P00338       | 0,00227    | 15,8861 | 0,0629 | 0,00657       | 9,6288  | 0,1039 | 0,00716       | 8,50492  | 0,11758 |
| P00558       | 0,00521    | 11,0840 | 0,0902 | 0,01197       | 8,8984  | 0,1124 | 0,01757       | 5,74196  | 0,17416 |
| P07195       | 0,00020    | 4,4237  | 0,2261 | 0,00043       | 4,8799  | 0,2049 | 0,00040       | 4,24047  | 0,23582 |
| P11177       | 0,00025    | 3,3274  | 0,3005 | 0,00007       | 3,9682  | 0,2520 | 0,00056       | 3,08079  | 0,32459 |
| P04075       | 0,00215    | 2,4924  | 0,4012 | 0,02837       | 1,6786  | 0,5957 | 0,03026       | 1,63191  | 0,61278 |
| P06744       | 0,01818    | 6,0802  | 0,1645 | 0,07907       | 2,9407  | 0,3401 | 0,07283       | 2,97811  | 0,33578 |
| P36871       | 0,00102    | 3,0452  | 0,3284 | 0,00093       | 3,9615  | 0,2524 | 0,06494       | 1,71947  | 0,58157 |
| P11413       | 0,04359    | 2,5312  | 0,3951 | 0,08456       | 2,1810  | 0,4585 | 0,15349       | 1,75005  | 0,57141 |
| P26038       | 0,00183    | 7,8019  | 0,1282 | 0,00423       | 7,7890  | 0,1284 | 0,01426       | 3,51130  | 0,28479 |
| P60981       | 0,01264    | 2,7749  | 0,3604 | 0,00949       | 3,6291  | 0,2756 | 0,03596       | 2,32032  | 0,43097 |
| O15145       | 0,03550    | 1,9633  | 0,5094 | 0,03075       | 2,2323  | 0,4480 | 0,07432       | 1,89544  | 0,52758 |
| P31146       | 0,02682    | 7,7937  | 0,1283 | 0,04627       | 7,0536  | 0,1418 | 0,06065       | 4,95010  | 0,20202 |
| P09493       | 0,00067    | 3,3362  | 0,2997 | 0,17578       | 1,5345  | 0,6517 | 0,54669       | 1,26867  | 0,78822 |
| P35527       | 0,01110    | 3,3122  | 0,3019 | 0,21018       | 1,6810  | 0,5949 | 0,39924       | 1,45839  | 0,68569 |
| P35908       | 0,01057    | 3,4012  | 0,2940 | 0,22421       | 1,6262  | 0,6149 | 0,80451       | 1,15582  | 0,86519 |
| O15143       | 0,03327    | 3,1931  | 0,3132 | 0,14805       | 2,2362  | 0,4472 | 0,08785       | 2,45594  | 0,40718 |
| P04264       | 0,04388    | 3,0298  | 0,3301 | 0,31797       | 1,6514  | 0,6055 | 0,56492       | 1,35910  | 0,73578 |
| P02538       | 0,03943    | 2,2979  | 0,4352 | 0,80581       | 0,9159  | 1,0918 | 0,39320       | 0,43651  | 2,29091 |
| P67936       | 0,02908    | 2,1731  | 0,4602 | 0,72523       | 1,1393  | 0,8777 | 0,12007       | 1,81107  | 0,55216 |
| P02533       | 0,04754    | 1,9281  | 0,5186 | 0,61264       | 1,2025  | 0,8316 | 0,54192       | 1,29002  | 0,77518 |
| P61160       | 0,01259    | 2,7716  | 0,3608 | 0,01952       | 3,0163  | 0,3315 | 0,02779       | 2,80400  | 0,35663 |
| O15511       | 0,00214    | 2,4691  | 0,4050 | 0,01635       | 1,9209  | 0,5206 | 0,01250       | 2,04112  | 0,48993 |
| P60709       | 0,00017    | 3,3227  | 0,3010 | 0,00010       | 4,6201  | 0,2164 | 0,00019       | 3,99936  | 0,25004 |
| Q99439       | 0,01753    | 1,7689  | 0,5653 | 0,31092       | 0,8250  | 1,2121 | 0,68624       | 1,09535  | 0,91295 |
| P35612       | 0,04459    | 2,2199  | 0,4505 | 0,07243       | 1,8671  | 0,5356 | 0,54043       | 1,27007  | 0,78736 |
| Q13813       | 0,03011    | 1,6070  | 0,6223 | 0,77730       | 1,0525  | 0,9501 | 0,76590       | 1,07432  | 0,93083 |
| P50552       | 0,00181    | 2,0793  | 0,4809 | 0,07763       | 1,3778  | 0,7258 | 0,03742       | 1,51767  | 0,65890 |
| O75083       | 0,04398    | 1,6445  | 0,6081 | 0,01725       | 1,9767  | 0,5059 | 0,00923       | 2,03483  | 0,49144 |
| Q16181       | 0,00596    | 2,5013  | 0,3998 | 0,00211       | 3,9887  | 0,2507 | 0,00776       | 3,20606  | 0,31191 |
| P17931       | 0,02231    | 2,5621  | 0,3903 | 0,07952       | 2,0125  | 0,4969 | 0,18135       | 1,63924  | 0,61004 |
| Q96QK1       | 0,02213    | 2,4674  | 0,4053 | 0,02051       | 2,8957  | 0,3453 | 0,62150       | 1,27891  | 0,78192 |
| Q15833       | 0,00364    | 2,4736  | 0,4043 | 0,01182       | 1,8581  | 0,5382 | 0,04713       | 1,62730  | 0,61451 |
| P68036       | 0,00112    | 2,7056  | 0,3696 | 0,05808       | 1,5782  | 0,6336 | 0,03026       | 1,90323  | 0,52542 |
| P30040       | 0,01351    | 1,7389  | 0,5751 | 0,32260       | 1,2186  | 0,8206 | 0,02382       | 1,61809  | 0,61801 |
| Q13492       | 0,00960    | 1,5878  | 0,6298 | 0,05289       | 1,5561  | 0,6427 | 0,11727       | 1,43264  | 0,69801 |
| P30049       | 0,00680    | 1,6931  | 0,5906 | 0,53776       | 1,1567  | 0,8645 | 0,74581       | 1,08226  | 0,92399 |
| P25705       | 0,00023    | 3,2681  | 0,3060 | 0,00057       | 3,6018  | 0,2776 | 0,04230       | 1,90452  | 0,52507 |
| O75390       | 0,01178    | 1,4719  | 0,6794 | 0,00385       | 1,7114  | 0,5843 | 0,02618       | 1,50682  | 0,66365 |
| P30044       | 0,02502    | 2,2293  | 0,4486 | 0,12596       | 1,6549  | 0,6043 | 0,10413       | 1,83311  | 0,54552 |
| P06576       | 0,00053    | 2,0450  | 0,4890 | 0,13495       | 1,3369  | 0,7480 | 0,12505       | 1,41316  | 0,70763 |
| Q99798       | 0,00098    | 1,9608  | 0,5100 | 0,00059       | 2,4216  | 0,4129 | 0,03639       | 1,48480  | 0,67349 |
| P13804       | 0,00001    | 4,0450  | 0,2472 | 0,00000       | 6,3910  | 0,1565 | 0,00000       | 6,48352  | 0,15424 |

|        |         |         |        |         |        |        |         |         |         |
|--------|---------|---------|--------|---------|--------|--------|---------|---------|---------|
| P10809 | 0,00000 | 5,2493  | 0,1905 | 0,00629 | 2,1241 | 0,4708 | 0,00026 | 2,78327 | 0,35929 |
| P61604 | 0,00053 | 2,6459  | 0,3779 | 0,00456 | 2,8276 | 0,3537 | 0,00069 | 3,14836 | 0,31763 |
| P00505 | 0,01390 | 1,7565  | 0,5693 | 0,00082 | 2,3502 | 0,4255 | 0,00045 | 2,54421 | 0,39305 |
| P40926 | 0,00487 | 1,4994  | 0,6669 | 0,00138 | 1,8529 | 0,5397 | 0,00973 | 1,52901 | 0,65402 |
| P69905 | 0,01456 | 3,6070  | 0,2772 | 0,28477 | 1,5845 | 0,6311 | 0,06217 | 2,38018 | 0,42014 |
| P68871 | 0,00312 | 4,8483  | 0,2063 | 0,35957 | 1,4975 | 0,6678 | 0,02418 | 2,56696 | 0,38957 |
| P55072 | 0,00001 | 4,2616  | 0,2347 | 0,00001 | 5,0585 | 0,1977 | 0,00030 | 2,55665 | 0,39114 |
| Q14697 | 0,00598 | 1,8336  | 0,5454 | 0,00223 | 2,2915 | 0,4364 | 0,00179 | 2,16773 | 0,46131 |
| P16402 | 0,00069 | 13,1325 | 0,0761 | 0,02693 | 3,4692 | 0,2883 | 0,00713 | 4,39111 | 0,22773 |
| P16401 | 0,00302 | 11,1611 | 0,0896 | 0,69273 | 1,3543 | 0,7384 | 0,93415 | 0,95581 | 1,04623 |
| P08133 | 0,00566 | 2,0414  | 0,4899 | 0,10789 | 1,4113 | 0,7086 | 0,83936 | 1,02851 | 0,97228 |
| P09525 | 0,00169 | 2,1524  | 0,4646 | 0,13379 | 1,4652 | 0,6825 | 0,14316 | 1,31800 | 0,75872 |
| P04083 | 0,00182 | 4,9757  | 0,2010 | 0,09142 | 1,7698 | 0,5650 | 0,18913 | 1,48095 | 0,67524 |
| P52209 | 0,03780 | 8,8029  | 0,1136 | 0,06949 | 6,3699 | 0,1570 | 0,08984 | 4,50808 | 0,22182 |
| P05089 | 0,01343 | 3,5286  | 0,2834 | 0,05122 | 2,4578 | 0,4069 | 0,06146 | 2,26193 | 0,44210 |
| P29401 | 0,04527 | 2,9138  | 0,3432 | 0,06156 | 2,9783 | 0,3358 | 0,05156 | 3,34076 | 0,29933 |
| Q16762 | 0,01453 | 2,0310  | 0,4924 | 0,37557 | 1,2729 | 0,7856 | 0,50159 | 1,23741 | 0,80814 |
| P30566 | 0,00070 | 4,2306  | 0,2364 | 0,00029 | 7,3462 | 0,1361 | 0,59558 | 1,35666 | 0,73711 |
| Q00013 | 0,00815 | 2,2653  | 0,4414 | 0,01694 | 2,3394 | 0,4275 | 0,25515 | 1,59700 | 0,62617 |
| P02766 | 0,03495 | 2,0798  | 0,4808 | 0,03616 | 2,4000 | 0,4167 | 0,14350 | 1,79447 | 0,55727 |
| Q9H2U2 | 0,00061 | 1,8073  | 0,5533 | 0,01593 | 1,5000 | 0,6667 | 0,09855 | 1,35628 | 0,73731 |
| Q7L5Y6 | 0,03865 | 2,8429  | 0,3518 | 0,13389 | 1,7815 | 0,5613 | 0,20109 | 1,58353 | 0,63150 |
| P19971 | 0,00061 | 3,9674  | 0,2521 | 0,00143 | 3,6955 | 0,2706 | 0,01949 | 2,00677 | 0,49831 |
| P00488 | 0,01213 | 3,3421  | 0,2992 | 0,01760 | 3,2396 | 0,3087 | 0,01486 | 3,28603 | 0,30432 |
| P06737 | 0,00193 | 8,5721  | 0,1167 | 0,00523 | 6,9374 | 0,1441 | 0,00817 | 4,77521 | 0,20941 |
| P62136 | 0,00119 | 1,7576  | 0,5690 | 0,00881 | 2,1843 | 0,4578 | 0,00363 | 1,68048 | 0,59507 |
| P30101 | 0,02543 | 1,7864  | 0,5598 | 0,96899 | 0,9913 | 1,0088 | 0,54257 | 0,84835 | 1,17875 |
| P55786 | 0,04041 | 2,2783  | 0,4389 | 0,16748 | 1,5985 | 0,6256 | 0,18618 | 1,52446 | 0,65597 |
| P07741 | 0,02186 | 3,7614  | 0,2659 | 0,03114 | 3,9742 | 0,2516 | 0,06858 | 3,12402 | 0,32010 |
| Q06323 | 0,00209 | 3,2949  | 0,3035 | 0,05653 | 2,1081 | 0,4744 | 0,01745 | 2,30313 | 0,43419 |
| P08571 | 0,04245 | 2,2551  | 0,4434 | 0,03281 | 2,7823 | 0,3594 | 0,88387 | 0,94781 | 1,05506 |
| P02652 | 0,03624 | 2,7056  | 0,3696 | 0,03247 | 3,3625 | 0,2974 | 0,69266 | 1,23700 | 0,80841 |
| P30086 | 0,03568 | 1,8783  | 0,5324 | 0,08110 | 1,5742 | 0,6353 | 0,41714 | 1,24245 | 0,80486 |
| P17612 | 0,01123 | 3,4230  | 0,2921 | 0,01737 | 3,5329 | 0,2831 | 0,05835 | 2,35147 | 0,42527 |
| P01860 | 0,01622 | 1,9486  | 0,5132 | 0,01370 | 2,0003 | 0,4999 | 0,03336 | 2,04413 | 0,48921 |
| Q5VTE0 | 0,00174 | 2,8852  | 0,3466 | 0,00611 | 2,7129 | 0,3686 | 0,01398 | 2,35331 | 0,42493 |
| Q9NTK5 | 0,00540 | 9,0976  | 0,1099 | 0,05524 | 2,9147 | 0,3431 | 0,02276 | 4,57438 | 0,21861 |
| P62826 | 0,01259 | 7,8279  | 0,1277 | 0,02133 | 8,4856 | 0,1178 | 0,07584 | 2,97366 | 0,33629 |
| O00299 | 0,00060 | 3,9351  | 0,2541 | 0,01316 | 2,0831 | 0,4800 | 0,06744 | 1,63867 | 0,61025 |
| P38606 | 0,00137 | 2,9531  | 0,3386 | 0,00760 | 2,4614 | 0,4063 | 0,00284 | 2,93126 | 0,34115 |
| P31948 | 0,03316 | 3,2562  | 0,3071 | 0,23241 | 1,6688 | 0,5992 | 0,22847 | 1,74199 | 0,57406 |
| Q15366 | 0,03144 | 2,1815  | 0,4584 | 0,01987 | 3,0474 | 0,3282 | 0,05697 | 2,20238 | 0,45405 |
| P61978 | 0,00455 | 1,9658  | 0,5087 | 0,01090 | 1,7219 | 0,5807 | 0,02331 | 1,58640 | 0,63036 |
| P09651 | 0,03792 | 1,7249  | 0,5798 | 0,10181 | 1,6196 | 0,6174 | 0,10803 | 1,53087 | 0,65322 |
| P26583 | 0,00430 | 5,3391  | 0,1873 | 0,06362 | 2,4046 | 0,4159 | 0,21889 | 1,59645 | 0,62639 |
| P40199 | 0,04332 | 3,9420  | 0,2537 | 0,19983 | 2,0064 | 0,4984 | 0,67448 | 1,35539 | 0,73780 |
| Q92882 | 0,02453 | 3,3752  | 0,2963 | 0,26182 | 1,5883 | 0,6296 | 0,81802 | 1,09957 | 0,90945 |