Supplementary Table 1. Down-regulated glycoproteinsin serum AD group (Identified proteins from Uniprot homo sapiens database)

| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q9UBG0 | C-type mannose receptor 2 (C-type lectin domain family 13 member E) (Endocytic receptor 180) (Macrophage mannose receptor 2) (Urokinase-type plasminogen activator receptor-associated protein) (UPAR-associated protein) (Urokinase receptorassociated protein) (CD antigen CD280) | 166,674 | N -linked <br> (GlcNAc...) <br> (complex) <br> asparagine | PTM: N-glycosylated. |
| Q96CS3 | FAS-associated factor 2 (Protein ETEA) (UBX domain-containing protein 3B) (UBX domaincontaining protein 8) | 52,623 |  |  |
| Q9Y6E7 | NAD-dependent protein lipoamidase sirtuin-4, mitochondrial (EC 2.3.1.-) (NAD-dependent ADPribosyltransferase sirtuin-4) (EC 2.4.2.-) (NADdependent protein deacetylase sirtuin-4) (EC 2.3.1.286) (Regulatory protein SIR2 homolog 4) (SIR2-like protein 4) | 35,188 |  |  |
| Q8N6S4 | Ankyrin repeat domain-containing protein 13C | 60,818 |  |  |
| Q9UHR4 | Brain-specific angiogenesis inhibitor 1-associated protein 2-like protein 1 (BAI1-associated protein 2like protein 1) (Insulin receptor tyrosine kinase substrate) | 56,883 |  | PTM: Phosphorylated on tyrosine in response to insulin |
| B2RUY7 | von Willebrand factor C domain-containing protein 2-like (Brorin-like) | 24,570 |  |  |
| Q9Y3F4 | Serine-threonine kinase receptor-associated protein (MAP activator with WD repeats) (UNR-interacting protein) (WD-40 repeat protein PT-WD) | 38,438 |  |  |
| Q8TCV5 | WAP four-disulfide core domain protein 5 (Putative protease inhibitor WAP1) (p53-responsive gene 5 protein) | 24,238 |  |  |
| O60568 | Multifunctional procollagen lysine hydroxylase and glycosyltransferase LH3 [Includes: Procollagen-lysine,2-oxoglutarate 5-dioxygenase 3 (EC 1.14.11.4) (Lysyl hydroxylase 3) (LH3); Procollagen glycosyltransferase (EC 2.4.1.50) (EC 2.4.1.66) (Galactosylhydroxylysineglucosyltransferase) (Procollagen galactosyltransferase) | 84,785 | N-linked (GlcNAc...) asparagine |  |
| Q7Z7J5 | Developmental pluripotency-associated protein 2 (Pluripotent embryonic stem cell-related gene 1 protein) | 33,784 |  |  |
| Q8N6C5 | Immunoglobulin superfamily member 1 (IgSF1) (Immunoglobulin-like domain-containing protein 1) (Inhibin-binding protein) (InhBP) (Pituitary glandspecific factor 2) (p120) | 148,936 | N-linked (GlcNAc...) asparagine |  |
| Q04837 | Single-stranded <br> mitochondrial <br> interacting protein 17) DNA-binding protein, <br> (MtSSB)  $\quad$ (PWP1- | 17,260 |  |  |
| Q7RTX1 | Taste receptor type 1 member 1 (G-protein coupled receptor 70) | 93,074 | N -linked (GlcNAc...) asparagine |  |
| P13994 | Coiled-coil domain-containing protein 130 ( 9 kDa protein) | 44,802 |  |  |
| Q5T440 | Putative transferase CAF17, mitochondrial (EC 2.1.-.-) (Iron-sulfur cluster assembly factor homolog) | 38,155 |  |  |
| A7E2S9 | Putative ankyrin repeat domain-containing protein 30B-like | 28,549 |  |  |
| Q6QNK2 | Adhesion G-protein coupled receptor D1 (G-protein coupled receptor 133) (G-protein coupled receptor PGR25) | 96,530 | N -linked (GlcNAc...) asparagine |  |
| Q8NBR0 | Tumor protein p53-inducible protein 13 (Damagestimulated cytoplasmic protein 1) | 42,238 |  |  |
| A2VDJ0 | Transmembrane protein 131-like | 179,339 | N -linked (GlcNAc...) asparagine |  |
| Q9NZT2 | Opioid growth factor receptor (OGFr) (Protein 7-60) (Zeta-type opioid receptor | 73,325 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| P62910 | 60S ribosomal protein L32 (Large ribosomal subunit protein eL32) | 15,860 |  |  |
| Q8WXI2 | Connector enhancer of kinase suppressor of ras 2 (Connector enhancer of KSR 2) (CNK homolog protein 2) (CNK2) | 117,535 |  | PTM: Phosphorylated on tyrosine |
| O95396 | Adenylyltransferase and sulfurtransferase MOCS3 (Molybdenum cofactor synthesis protein 3) (Molybdopterin synthase sulfurylase) (MPT synthase sulfurylase) [Includes: Molybdopterinsynthase adenylyltransferase (EC 2.7.7.80) (Adenylyltransferase MOCS3) (Sulfur carrier protein MOCS2A adenylyltransferase); Molybdopterin-synthase sulfurtransferase (EC 2.8.1.11) (Sulfur carrier protein MOCS2A sulfurtransferase) (Sulfurtransferase MOCS3)] | 49,669 |  |  |
| Q8IVN8 | Somatomedin-B and thrombospondin type-1 domain-containing protein (RPE-spondin) | 29,610 | N-linked (GlcNAc...) asparagine |  |
| P55055 | Oxysterols receptor LXR-beta (Liver X receptor beta) (Nuclear receptor NER) (Nuclear receptor subfamily 1 group H member 2) (Ubiquitouslyexpressed nuclear receptor) | 50,974 |  | PTM: Sumoylated by SUMO2 at Lys-409 and Lys-447 during the hepatic acute phase response |
| Q7Z3I7 | Zinc finger protein 572 | 61,238 |  |  |
| Q9Y580 | RNA-binding protein 7 (RNA-binding motif protein 7) | 30,504 |  | PTM: Phosphorylated at Ser136 by MAPK14/p38-alphaactivated MAPKAPK2/MK2 |
| P48729 | Casein kinase I isoform alpha (CKI-alpha) (EC 2.7.11.1) (CK1) | 38,915 |  |  |
| P19532 | Transcription factor E3 (Class E basic helix-loophelix protein 33) (bHLHe33) | 61,521 |  | PTM: Phosphorylation by MTOR regulates its subcellular location and activity |
| Q8WXH4 | Ankyrin repeat and SOCS box protein 11 (ASB-11) | 35,367 |  |  |
| Q86U42 | Polyadenylate-binding protein 2 (PABP-2) (Poly(A)-binding protein 2) (Nuclear poly(A)binding protein 1) (Poly(A)-binding protein II) (PABII) (Polyadenylate-binding nuclear protein 1) | 32,749 |  | PTM: Arginine dimethylation is asymmetric and involves PRMT1 and PRMT3 |
| Q96MT1 | RING finger protein 145 (EC 2.3.2.27) | 75,617 |  |  |
| P17643 | 5,6-dihydroxyindole-2-carboxylic acid oxidase (DHICA oxidase) (EC 1.14.18.-) (Catalase B) (Glycoprotein 75) (Melanoma antigen gp75) (Tyrosinase-related protein 1) (TRP) (TRP-1) (TRP1) | 60,724 | N-linked (GlcNAc...) asparagine | PTM: Glycosylated |
| Q9NW75 | G patch domain-containing protein 2 | 58,944 |  |  |
| Q09472 | Histone acetyltransferase p300 (p300 HAT) (EC 2.3.1.48) (E1A-associated protein p300) (Histone butyryltransferase p300) (EC 2.3.1.-) (Histone crotonyltransferase p300) (EC 2.3.1.-) (Protein 2hydroxyisobutyryltransferase p300) (EC 2.3.1.-) (Protein lactyltransferas p300) (EC 2.3.1.-) (Protein propionyltransferase p300) (EC 2.3.1.-) | 264,161 |  | PTM: Acetylated on Lys at up to 17 positions by intermolecular autocatalysis |
| P58173 | Olfactory receptor 2B6 (Hs6M1-32) (Olfactory receptor 2B1) (Olfactory receptor 2B5) (Olfactory receptor 5-40) (OR5-40) (Olfactory receptor 6-31) (OR6-31) (Olfactory receptor OR6-4) | 35,414 | N -linked <br> (GlcNAc...) <br> asparagine |  |
| Q15776 | Zinc finger protein with KRAB and SCAN domains 8 (LD5-1) (Zinc finger protein 192) | 65,816 |  |  |
| Q9UHQ7 | Transcription elongation factor A protein-like 9 (TCEA-like protein 9) (Transcription elongation factor S-II protein-like 9) (WW domain-binding protein 5) (WBP-5) | 12,749 |  |  |
| P68402 | Platelet-activating factor acetylhydrolase IB subunit alpha2 (EC 3.1.1.47) (PAF acetylhydrolase 30 kDa subunit) (PAF-AH 30 kDa subunit) (PAFAH subunit beta) (PAFAH subunit beta) | 25,569 |  |  |
| Q6PJF5 | Inactive rhomboid protein 2 (iRhom2) (Rhomboid 5 homolog 2) (Rhomboid family member 2) (Rhomboid veinlet-like protein 5) (Rhomboid veinlet-like protein 6) | 96,686 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q8NB78 | Lysine-specific histone demethylase 1B (EC 1.14.99.66) (Flavin-containing amine oxidase domain-containing protein 1) (Lysine-specific histone demethylase 2) | 92,098 |  |  |
| Q2PZI1 | Probable C-mannosyltransferase DPY19L1 (EC 2.4.1.-) (Dpy-19-like protein 1) (Protein dpy-19 homolog 1) | 77,319 |  |  |
| $\begin{aligned} & \text { A0A1B0G } \\ & \text { U71 } \end{aligned}$ | Uncharacterized protein CFAP97D2 (CFAP97 domain-containing protein 2) | 11,681 |  |  |
| P48745 | CCN family member 3 (Cellular communication network factor 3) (Insulin-like growth factorbinding protein 9) (IBP-9) (IGF-binding protein 9) (IGFBP-9) (Nephro blastoma-overexpressed gene protein homolog) (Protein NOV homolog) (NovH) | 39,162 | N -linked (GlcNAc...) asparagine | PTM: May be palmitoylated on Cys-244, which is important for extracellular secretion |
| Q9NXW9 | Alpha-ketoglutarate-dependent dioxygenase alkB homolog 4 (Alkylated DNA repair protein alkB homolog 4) (DNA N6-methyl adenine demethylase ALKBH4) (EC 1.14.11.51) (Lysine-specific demethylase ALKBH4) (EC 1.14.11.-) | 33,838 |  |  |
| Q00G26 | Perilipin-5 (Lipid storage droplet protein 5) | 50,791 |  | PTM: Phosphorylated by PKA. Phosphorylated on serine in skeletal muscle at rest or upon lipolytic stimulation. |
| P55895 | $\mathrm{V}(\mathrm{D}) \mathrm{J}$ recombination-activating protein 2 (RAG-2) | 59,241 |  |  |
| O95922 | Probable tubulin polyglutamylase TTLL1 (EC 6.-.-.-) (Tubulin polyglutamylase complex subunit 3) (PGs3) (Tubulin--tyrosine ligase-like protein 1) | 48,988 |  |  |
| A8MYP8 | Outer dense fiber protein 3B (Outer dense fiber protein 3-like protein 3) | 27,280 |  |  |
| Q9P2Y5 | UV radiation resistance-associated gene protein (p63) | 78,151 |  | PTM: Phosphorylated at Ser498 by MTOR under basal conditions |
| P28300 | Protein-lysine 6-oxidase (EC 1.4.3.13) (Lysyl oxidase) [Cleaved into: Protein-lysine 6-oxidase, long form; Protein-lysine 6-oxidase, short form] | 46,944 | N-linked (GlcNAc...) asparagine | PTM: The lysine tyrosylquinone cross-link (LTQ) is generated by condensation of the epsilon- amino group of a lysine with a topaquinone produced by oxidation of tyrosine. |
| Q9BW92 | Threonine--tRNA ligase, mitochondrial (EC 6.1.1.3) (Threonyl-tRNA synthetase) (ThrRS) (Threonyl-tRNA synthetase-like 1) | 81,036 |  |  |
| Q86T96 | E3 ubiquitin-protein ligase RNF180 (EC 2.3.2.27) (RING finger protein 180) (RING-type E3 ubiquitin transferase RNF180) | 68,254 |  |  |
| P05000 | Interferon omega-1 (Interferon alpha-II-1) | 22,319 | N -linked (GlcNAc...) asparagine |  |
| P82663 | 28S ribosomal protein S25, mitochondrial (MRPS25) (S25mt) (Mitochondrial small ribosomal subunit protein mS 25 ) | 20,116 |  |  |
| Q9UNQ2 | Probable dimethyladenosine transferase (EC 2.1.1.183) (DIM1 dimethyladenosine transferase 1 homolog) (DIM1 dimethyladenosine transferase 1like) (Probable 18S rRNA (adenine(1779)$\mathrm{N}(6) /$ adenine(1780)-N(6))-dimethyltransferase) (Probable 18S rRNA dimethylase) | 35,236 |  |  |
| Q12778 | Forkhead box protein O1 (Forkhead box protein O1A) (Forkhead in rhabdomyosarcoma) | 69,662 |  | PTM: Phosphorylation by NLK promotes nuclear export and inhibits the transcriptional activity. |
| Q5T0L3 | Spermatogenesis-associated protein 46 | 29,150 |  |  |
| Q9NYW1 | Taste receptor type 2 member 9 (T2R9) (Taste receptor family B member 6) (TRB6) | 35,611 | N-linked (GlcNAc...) asparagine |  |
| Q14D33 | Receptor-transporting protein 5 (3CxxC-type zinc finger protein 5) (CXXC-type zinc finger protein 11) | 60,488 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q9BXI | TBC1 domain family member 10A (EBP50-PDX interactor of 64 kDa ) (EPI64 protein) (Rab27A-GAP-alpha) | 57,118 |  | PTM: Exists in both phosphorylated and nonphosphorylated state. |
| A6NM28 | Zinc finger protein 92 homolog (Zfp-92) | 45,791 |  |  |
| P27797 | Calreticulin (CRP55) (Calregulin) (Endoplasmic reticulum resident protein 60) (ERp60) (HACBP) (grp60) | 48,142 | N-linked (GlcNAc...) asparagine |  |
| O95965 | Integrin beta-like protein 1 (Osteoblast-specific cysteine-rich protein) (Ten integrin EGF-like repeat domain-containing protein) | 53,921 | N -linked (GlcNAc...) asparagine |  |
| P49901 | Sperm mitochondrial-associated cysteine-rich protein | 12,767 |  |  |
| Q8TCD5 | 5'(3')-deoxyribonucleotidase, cytosolic type (EC 3.1.3.-) (Cytosolic 5',3'-pyrimidine nucleotidase) (Deoxy-5'-nucleotidase 1) (dNT-1) | 23,383 |  |  |
| Q3MIR4 | Cell cycle control protein 50B (P4-ATPase flippase complex beta subunit TMEM30B) (Transmembrane protein 30B) | 38,941 | N-linked (GlcNAc...) asparagine |  |
| Q8TAG6 | Vexin | 22,584 |  |  |
| Q8NCW0 | Kremen protein 2 (Dickkopf receptor 2) (Kringle domain-containing transmembrane protein 2) (Kringle-containing protein marking the eye and the nose) | 48,849 | N -linked (GlcNAc...) asparagine |  |
| Q8N584 | Tetratricopeptide repeat protein 39C (TPR repeat protein 39C) | 65,870 |  |  |
| Q2HRB3 | Capsid vertex component 2 | 61,424 |  |  |
| Q8WWX8 | Sodium/myo-inositol cotransporter $2(\mathrm{Na}(+) /$ myoinositol cotransporter 2) (Sodium-dependent glucose cotransporter) (Sodium/glucose cotransporter KST1) (Sodium/myo-inositol transporter 2) (SMIT2) (Solute carrier family 5 member 11) | 74,036 |  |  |
| Q9NUQ3 | Gamma-taxilin (Environmental lipopolysaccharideresponding gene protein) (Factor inhibiting ATF4mediated transcription) <br> (FIAT) <br> (Lipopolysaccharide-specific response protein 5) | 60,586 |  |  |
| Q8TEC5 | E3 ubiquitin-protein ligase SH3RF2 (EC 2.3.2.27) (Heart protein phosphatase 1-binding protein) (HEPP1) (POSH-eliminating RING protein) (Protein phosphatase 1 regulatory subunit 39) (RING finger protein 158) (RING-type E3 ubiquitin transferase SH3RF2) (SH3 domain-containing RING finger protein 2) | 79,320 |  | PTM: Autoubiquitinated |
| Q9HAE3 | EF-hand protein 1 calcium-binding domain-containing | 24,488 |  |  |
| Q15054 | DNA polymerase delta subunit 3 (DNA polymerase delta subunit C) (DNA polymerase delta subunit p66) (DNA polymerase delta subunit p68) | 51,400 |  | PTM: Ubiquitinated |
| Q9NR12 | PDZ and LIM domain protein 7 (LIM mineralization protein) (LMP) (Protein enigma) | 49,845 |  |  |
| P0C7U0 | Protein ELFN1 (Extracellular leucine-rich repeat and fibronectin type-III domain-containing protein <br> 1) (Protein phosphatase 1 regulatory subunit 28) | 90,477 | N -linked (GlcNAc...) asparagine |  |
| Q8N6M9 | AN1-type zinc finger protein 2A | 16,477 |  |  |
| Q9NVN3 | Synembryn-B (Brain synembryn) (hSyn) (Protein Ric-8B) | 58,825 |  |  |
| O75954 | Tetraspanin-9 (Tspan-9) (Tetraspan NET-5) | 26,779 | N -linked (GlcNAc...) asparagine | PTM: Glycosylated |
| Q8IWA5 | Choline transporter-like protein 2 (Solute carrier family 44 member 2) | 80,124 | N -linked (GlcNAc...) asparagine |  |
| Q5PSV4 | Breast cancer metastasis-suppressor 1-like protein (BRMS1-homolog protein p40) (BRMS1-like protein p40) | 37,629 |  |  |
| Q96Q07 | $\mathrm{BTB} / \mathrm{POZ}$ domain-containing protein 9 | 69,188 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q5VZR2 | NUT family member 2G | 79,011 |  |  |
| Q504Y0 | Zinc transporter ZIP12 (LIV-1 subfamily of ZIP zinc transporter 8) (LZT-Hs8) (Solute carrier family 39 member 12) (Zrt- and Irt-like protein 12) (ZIP12) | 76,666 |  |  |
| P16455 | Methylated-DNA--protein-cysteine <br> methyltransferase (EC 2.1.1.63) (6-O- <br> methylguanine-DNA methyltransferase) (MGMT) <br> (O-6-methylguanine-DNA-alkyltransferase) | 21,646 |  |  |
| Q4TWH8 | Non-structural polyprotein 1AB [Cleaved into: VPg; Protein p19; Transmembrane protein 1A; Serine protease p27 (p27) (EC 3.4.21.-); Protein p20; RNAdirected RNA polymerase p57 (p57) (EC 2.7.7.48)] | 161,728 |  |  |
| B1APH4 | Putative zinc finger protein 487 (KRAB domain only protein 1) | 51,624 |  |  |
| Q96CC6 | Inactive rhomboid protein 1 (iRhom1) (Epidermal growth factor receptor-related protein) (Rhomboid 5 homolog 1) (Rhomboid family member 1) (p100hRho) | 97,401 | N -linked (GlcNAc...) asparagine | PTM: N-glycosylated. |
| Q9C0D3 | Protein zyg-11 homolog B | 83,921 |  |  |
| Q8TC27 | Disintegrin and metalloproteinase domaincontaining protein 32 (ADAM 32) | 87,948 | N-linked (GlcNAc...) asparagine |  |
| P36873 | Serine/threonine-protein phosphatase PP1-gamma catalytic subunit (PP-1G) (EC 3.1.3.16) (Protein phosphatase 1C catalytic subunit) | 36,984 |  | PTM: Phosphorylated by NEK2. |
| Q86SF2 | N-acetylgalactosaminyltransferase 7 (EC 2.4.1.41)  <br> (Polypeptide GalNAc transferase 7 ) (GalNAc-T7)  <br> (pp-GaNTase 7) (Protein-UDP  <br> acetylgalactosaminyltransferase 7) (UDP- <br> GalNAc:polypeptide  <br> acetylgalactosaminyltransferase 7)  <br>  $\quad$.   | 75,389 |  |  |
| P59044 | NACHT, LRR and PYD domains-containing protein 6 (Angiotensin II/vasopressin receptor) (PYRIN-containing APAF1-like protein 5) | 98,768 |  |  |
| Q9NXS3 | $\begin{array}{llll}\begin{array}{l}\text { Kelch-like protein } \\ \text { containing protein 5) }\end{array} & 28 & \text { (BTB/POZ } & \text { domain- } \\ \end{array}$ | 64,192 |  |  |
| Q8TD90 | Melanoma-associated antigen E2 (Hepatocellular carcinoma-associated protein 3) (MAGE-E2 antigen) | 60,378 |  |  |
| P23142 | Fibulin-1 (FIBL-1) | 77,214 | N-linked (GlcNAc...) asparagine |  |
| P40259 | B-cell antigen receptor complex-associated protein beta chain (B-cell-specific glycoprotein B29) (Igbeta) (Immunoglobulin-associated B29 protein) (CD antigen CD79b) | 26,048 | N -linked (GlcNAc...) asparagine | PTM: Phosphorylated on tyrosine upon B-cell activation. |
| Q53F39 | Metallophosphoesterase 1 (EC 3.1.-.-) (Post-GPI attachment to proteins factor 5) | 45,141 |  |  |
| O95858 | Tetraspanin-15 (Tspan-15) (Tetraspan NET-7) (Transmembrane 4 superfamily member 15) | 33,165 | N-linked (GlcNAc...) asparagine |  |
| P62995 | Transformer-2 protein homolog beta (TRA-2 beta) (TRA2-beta) (hTRA2-beta) (Splicing factor, arginine/serine-rich 10) (Transformer-2 protein homolog B) | 33,666 |  | PTM: Phosphorylated in the RS domains. |
| P78317 | E3 ubiquitin-protein ligase RNF4 (EC 2.3.2.27) (RING finger protein 4) (RING-type E3 ubiquitin transferase RNF4) (Small nuclear ring finger protein) (Protein SNURF) | 21,319 |  | PTM: Sumoylated; conjugated by one or two SUMO1 moieties. |
| Q14153 | Protein FAM53B (Protein simplet) | 45,768 |  |  |
| O94921 | Cyclin-dependent kinase 14 (EC 2.7.11.22) (Cell division protein kinase 14) (Serine/threonineprotein kinase PFTAIRE-1) (hPFTAIRE1) | 53,057 |  |  |
| Q00537 | Cyclin-dependent kinase 17 (EC 2.7.11.22) (Cell division protein kinase 17) (PCTAIRE-motif protein kinase 2) (Serine/threonine-protein kinase PCTAIRE-2) | 59,582 |  |  |
| Q8N398 | von Willebrand factor A domain-containing protein 5B2 | 131,668 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q16880 | 2-hydroxyacylsphingosine 1-beta- <br> galactosyltransferase (EC 2.4.1.47) <br> (Ceramide  <br> UDP-galactosyltransferase) (Cerebroside synthase) <br> (UDP-galactose-ceramide galactosyltransferase)  | 61,438 | N -linked (GlcNAc...) asparagine |  |
| Q5TAP6 | U3 small nucleolar RNA-associated protein 14 homolog C | 87,188 |  |  |
| Q6XQN6 | Nicotinate phosphoribosyltransferase (NAPRTase) (EC 6.3.4.21) (FHA-HIT-interacting protein) (Nicotinate phosphoribosyltransferase domaincontaining protein 1) | 57,578 |  | PTM: Transiently  <br> phosphorylated <br> residue during <br> cycle. the reaction  |
| Q01130 | Serine/arginine-rich splicing factor 2 (Protein PR264) (Splicing component, 35 kDa ) (Splicing factor SC35) (SC-35) (Splicing factor, arginine/serine-rich 2) | 25,476 |  | PTM: Extensively <br> phosphorylated on serine <br> residues in the RS domain.  |
| Q8TC56 | Protein FAM71B | 64,756 |  |  |
| Q9Y653 | Adhesion G-protein coupled receptor G1 (G-protein coupled receptor 56) (Protein TM7XN1) [Cleaved into: ADGRG1 N-terminal fragment (ADGRG1 NT) (GPR56 N-terminal fragment) (GPR56 NT) (GPR56(N)) (GPR56 extracellular subunit) (GPR56 subunit alpha); ADGRG1 C-terminal fragment (ADGRG1 CT) (GPR56 C-terminal fragment) (GPR56 CT) (GPR56(C)) (GPR56 seventransmembrane subunit) (GPR56 7TM) (GPR56 subunit beta)] | 77,738 | N-linked (GlcNAc...) asparagine | PTM: Autoproteolytically cleaved into 2 fragments; the large extracellular N -terminal fragment (ADGRG1 NT) and the membrane-bound C terminal fragment (ADGRG1 CT) predominantly remain associated and non-covalently linked. |
| A6NGY5 | Olfactory receptor 51F1 | 35,849 |  |  |
| Q6P047 | Uncharacterized protein C8orf74 | 33,735 |  |  |
| O60902 | Short stature homeobox protein 2 (Homeobox protein Og12X) (Paired-related homeobox protein SHOT) | 34,953 |  |  |
| Q8NDV1 | Alpha-N-acetylgalactosaminide alpha-2,6sialyltransferase 3 (EC 2.4.99.7) (GalNAc alpha-2,6-sialyltransferase III) (ST6GalNAc III) (ST6GalNAcIII) (STY) (Sialyltransferase 7C) (SIAT7-C) | 35,395 | N-linked (GlcNAc...) asparagine |  |
| Q6UXG8 | Butyrophilin-like protein 9 | 59,716 | N-linked (GlcNAc...) asparagine |  |
| Q92772 | Cyclin-dependent kinase-like 2 (EC 2.7.11.22) (Protein kinase p56 KKIAMRE) (Serine/threonineprotein kinase KKIAMRE) | 56,019 |  |  |
| Q53EV4 | Leucine-rich repeat-containing protein 23 (Leucinerich protein B7) | 39,761 |  |  |
| Q68CZ6 | HAUS augmin-like complex subunit 3 | 69,650 |  |  |
| Q969W8 | Zinc finger protein 566 | 49,219 |  |  |
| Q13480 | GRB2-associated-binding protein 1 (GRB2associated binder 1) (Growth factor receptor bound protein 2-associated protein 1) | 76,616 |  | PTM: Phosphorylated in response to FGFR1 activation. SH2 domains. |
| Q9UJT9 | F-box/LRR-repeat protein 7 (F-box and leucine-rich repeat protein 7) (F-box protein FBL6/FBL7) | 54,575 |  |  |
| Q8TD55 | Pleckstrin homology domain-containing family O member 2 ( PH domain-containing family O member 2) (Pleckstrin homology domain-containing family Q member 1) ( PH domain-containing family Q member 1) | 53,350 |  |  |
| Q92805 | Golgin subfamily A member 1 (Golgin-97) | 88,184 |  |  |
| 060268 | Uncharacterized protein KIAA0513 | 46,639 |  |  |
| Q8N1Y9 | Putative uncharacterized protein FLJ37218 | 24,915 |  |  |
| Q16581 | C3a anaphylatoxin chemotactic receptor (C3AR) (C3a-R) | 53,864 | N-linked (GlcNAc...) asparagine | PTM: Among the sulfation sites Tyr-174 is essential for binding of C3a anaphylatoxin. |
| Q9NVP4 | Double zinc ribbon and ankyrin repeat-containing protein 1 | 82,192 |  |  |
| P17029 | Zinc finger protein with KRAB and SCAN domains 1 (Zinc finger protein 139) (Zinc finger protein 36) (Zinc finger protein KOX18) | 63,630 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q8IZ40 | REST corepressor 2 | 58,012 |  |  |
| P62070 | Ras-related protein R-Ras2 (EC 3.6.5.-) (Ras-like protein TC21) (Teratocarcinoma oncogene) | 23,400 |  | PTM: May be posttranslationally modified by both palmitoylation and polyisoprenylation. |
| Q17RB0 | Retrotransposon Gag-like protein 8B (Mammalian retrotransposon derived protein 8B) | 13,246 |  |  |
| Q9Y5N6 | Origin recognition complex subunit 6 | 28,107 |  |  |
| O43516 | WAS/WASL-interacting protein family member 1 (Protein PRPL-2) (Wiskott-Aldrich syndrome protein-interacting protein) (WASP-interacting protein) | 51,258 |  |  |
| Q9BY66 | Lysine-specific demethylase 5D (EC 1.14.11.67) (Histocompatibility Y antigen) ( $\mathrm{H}-\mathrm{Y}$ ) (Histone demethylase JARID1D) (Jumonji/ARID domaincontaining protein 1D) (Protein SmcY) ([histone H3]-trimethyl-L-lysine(4) demethylase 5D) | 174,073 |  |  |
| A1L190 | Synaptonemal complex central element protein 3 (Testis highly expressed gene 2 protein) (THEG-2) | 10,601 |  |  |
| P28324 | ETS domain-containing protein Elk-4 (Serum response factor accessory protein 1) (SAP-1) (SRF accessory protein 1) | 46,900 |  |  |
| A6NKC9 | SH2 domain-containing protein 7 | 49,807 |  |  |
| Q9Y535 | DNA-directed RNA polymerase III subunit RPC8 (RNA polymerase III subunit C8) (DNA-directed RNA polymerase III subunit H) (RNA polymerase III subunit 22.9 kDa subunit) (RPC22.9) | 22,918 |  |  |
| Q969U6 | F-box/WD repeat-containing protein 5 (F-box and WD-40 domain-containing protein 5) | 63,922 |  | PTM: Phosphorylated at Ser151 by PLK4 during the G1/S transition, leading to inhibit its ability to ubiquitinate SASS6. |
| $\begin{aligned} & \text { A0A0B4J1 } \\ & \text { X5 } \end{aligned}$ | Immunoglobulin heavy variable 3-74 | 12,840 |  |  |
| P07196 | Neurofilament light polypeptide (NF-L) (68 kDa neurofilament protein) (Neurofilament triplet L protein) | 61,517 | O-linked (GlcNAc) threonine | PTM: O-glycosylated. |
| P53367 | Arfaptin-1 (ADP-ribosylation factor-interacting protein 1) | 41,738 |  | PTM: Phosphorylated by PRKD1 |
| Q8IY34 | Solute carrier family 15 member 3 (Osteoclast <br> transporter) (Peptide transporter 3)  <br> (Peptide/histidine transporter 2)     | 63,560 | N-linked (GlcNAc...) asparagine |  |
| Q8IXL9 | IQ domain-containing protein F2 | 19,627 |  |  |
| Q9BXW7 | Haloacid dehalogenase-like hydrolase domaincontaining 5 (Cat eye syndrome critical region protein 5) | 46,321 |  |  |
| Q9BYV8 | Centrosomal protein of 41 kDa (Cep41) (Testisspecific gene A14 protein) | 41,368 |  |  |
| Q7KZI7 | Serine/threonine-protein kinase MARK2 (EC 2.7.11.1) (EC 2.7.11.26) (ELKL motif kinase 1) (EMK-1) (MAP/microtubule affinity-regulating kinase 2) (PAR1 homolog) (PAR1 homolog b) (Par1b) (Par1b) | 87,911 |  | PTM: Autophosphorylated |
| P05166 | Propionyl-CoA carboxylase beta chain, mitochondrial (PCCase subunit beta) (EC 6.4.1.3) (Propanoyl-CoA:carbon dioxide ligase subunit beta) | 58,216 |  |  |
| Q8NC60 | Nitric oxide-associated protein 1 | 78,458 |  |  |
| Q8NGD4 | Olfactory receptor 4K1 (Olfactory receptor OR1419) | 35,201 | N-linked (GlcNAc...) asparagine |  |
| Q9UKD2 | mRNA turnover protein 4 homolog (Ribosome assembly factor MRTO4) | 27,560 |  |  |
| Q9NV79 | Protein-L-isoaspartate O-methyltransferase domaincontaining protein 2 | 41,072 |  |  |
| Q92628 | Uncharacterized protein KIAA0232 | 154,789 |  |  |
| P56705 | Protein Wnt-4 | 39,052 | N-linked (GlcNAc...) asparagine | PTM: Palmitoleoylation is required for efficient binding to frizzled receptors. |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q8IWB6 | Inactive serine/threonine-protein kinase TEX14 (Protein kinase-like protein SgK307) (Sugen kinase 307) (Testis-expressed sequence 14) (Testisexpressed sequence 14 protein) | 167,901 |  | PTM: Phosphorylated on Thr residues by CDK1 during early phases of mitosis, promoting the interaction with PLK1 and recruitment to kinetochores. |
| Q9BYR2 | Keratin-associated protein 4-5 (Keratin-associated protein 4.5) (Ultrahigh sulfur keratin-associated protein 4.5) | 19,363 |  |  |
| Q6TDP4 | Kelch-like protein 17 (Actinfilin) | 69,874 |  |  |
| P18754 | Regulator of chromosome condensation (Cell cycle regulatory protein) (Chromosome condensation protein 1) | 44,969 |  | PTM: N-terminal methylation by METTL11A/NTM1 is required for binding doublestranded DNA and stable chromatin association. |
| Q92796 | Disks large homolog 3 (Neuroendocrine-DLG) (Synapse-associated protein 102) (SAP-102) (SAP102) (XLMR) | 90,314 |  |  |
| Q9UNX9 | ATP-sensitive inward rectifier potassium channel 14 (Inward rectifier K(+) channel Kir2.4) (IRK-4) (Potassium channel, inwardly rectifying subfamily J member 14) | 47,846 |  |  |
| Q8N945 | PRELI domain-containing protein 2 | 21,905 |  |  |
| Q8NGT0 | Olfactory receptor 13C9 (Olfactory receptor OR913) | 35,854 | N-linked (GlcNAc...) asparagine |  |
| P00749 | Urokinase-type plasminogen activator (Uplasminogen activator) (uPA) (EC 3.4.21.73) [Cleaved into: Urokinase-type plasminogen activator long chain A; Urokinase-type plasminogen activator short chain A; Urokinase-type plasminogen activator chain $B$ ] | 48,507 | O-linked (Fuc) threonine | PTM: Phosphorylation of Ser158 and Ser-323 |
| Q8WZ19 | BTB/POZ domain-containing adapter for CUL3mediated RhoA degradation protein 1 (hBACURD1) (BTB/POZ domain-containing protein KCTD13) (Polymerase delta-interacting protein 1) (TNFAIP1-like protein) | 36,357 |  |  |
| Q5TEU4 | Arginine-hydroxylase NDUFAF5, mitochondrial (EC 1.----) (NADH dehydrogenase [ubiquinone] 1 alpha subcomplex assembly factor 5) (Putative methyltransferase NDUFAF5) (EC 2.1.1.-) | 38,918 |  |  |
| P51687 | Sulfite oxidase, mitochondrial (EC 1.8.3.1) | 60,283 |  |  |
| Q8NEP9 | Zinc finger protein 555 | 73,084 |  |  |
| P31749 | RAC-alpha serine/threonine-protein kinase (EC 2.7.11.1) (Protein kinase B) (PKB) (Protein kinase B alpha) (PKB alpha) (Proto-oncogene c-Akt) (RAC-PK-alpha) | 55,686 | O-linked (GlcNAc) serine | PTM: O-GlcNAcylation at Thr-305 and Thr-312 inhibits activating phosphorylation at Thr-308 via disrupting the interaction between AKT1 and PDPK1. |
| P22090 | 40S ribosomal protein S4, Y isoform 1 (Small ribosomal subunit protein eS4) | 29,456 |  |  |
| Q13410 | Butyrophilin subfamily 1 member A1 (BT) | 58,960 | N-linked (GlcNAc...) asparagine | PTM: N-glycosylated |
| Q9UPY5 | Cystine/glutamate transporter (Amino acid transport system xc-) (Calcium channel blocker resistance protein CCBR1) (Solute carrier family 7 member 11) (xCT) | 55,423 | N-linked (GlcNAc...) asparagine |  |
| Q3SY46 | Keratin-associated protein 13-3 | 19,236 |  |  |
| Q9BY84 | Dual specificity protein phosphatase 16 (EC 3.1.3.16) (EC 3.1.3.48) (Mitogen-activated protein kinase phosphatase 7) (MAP kinase phosphatase 7) (МКР-7) | 73,102 |  | PTM: Phosphorylated at Ser446 by MAPK1/ERK2, which prevents its degradation, and thereby stabilizes it and blocks JNK MAPK activity. |
| Q9H3N8 | Histamine H4 receptor (H4R) (HH4R) (AXOR35) (G-protein coupled receptor 105) (GPRv53) (Pfi013) (SP9144) | 44,496 | N -linked (GlcNAc...) asparagine |  |
| Q9Y2L8 | Zinc finger protein with KRAB and SCAN domains 5 (Zinc finger protein 95 homolog) (Zfp-95) | 96,903 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q9UKU7 | Isobutyryl-CoA dehydrogenase, mitochondrial (IBDH) (EC 1.3.8.-) (Activator-recruited cofactor 42 kDa component) (ARC42) (Acyl-CoA dehydrogenase family member 8) (ACAD-8) | 45,070 |  |  |
| Q96KP1 | Exocyst complex component 2 (Exocyst complex component Sec5) | 104,066 |  |  |
| Q7RTX7 | Cation channel <br> (CatSper4) sperm-associated protein 4 | 54,092 |  |  |
| O00541 | Pescadillo homolog | 68,003 |  | PTM: Sumoylated. |
| Q969M2 | $\begin{aligned} & \hline \begin{array}{l} \text { Gap junction alpha-10 protein } \\ \text { (Cx62) } \end{array} \\ & \hline \end{aligned}$ | 61,872 |  |  |
| Q8NFU5 | Inositol polyphosphate multikinase (EC 2.7.1.140) (EC 2.7.1.151) (EC 2.7.1.153) (Inositol 1,3,4,6tetrakisphosphate 5-kinase) | 47,222 |  |  |
| Q9NQZ5 | StAR-related lipid transfer protein 7, mitochondrial (Gestational trophoblastic tumor protein 1) (START domain-containing protein 7) (StARD7) | 43,113 |  |  |
| Q96SZ6 | Mitochondrial tRNA methylthiotransferase CDK5RAP1 (EC 2.8.4.3) (CDK5 activator-binding protein C42) (CDK5 regulatory subunit-associated protein 1) (mt-tRNA-2-methylthio-N6dimethylallyladenosine synthase) (mt-tRNA-N6(dimethylallyl)adenosine(37) methylthiotransferase) | 67,689 |  |  |
| O75570 | Peptide chain release factor 1, mitochondrial (MRF1) (MtRF-1) | 52,306 |  |  |
| Q15428 | Splicing factor 3A subunit 2 (SF3a66) <br> (Spliceosome-associated protein 62) (SAP 62)  | 49,256 |  |  |
| O15151 | Protein Mdm4 (Double minute 4 protein) (Mdm2like p53-binding protein) (Protein Mdmx) (p53binding protein Mdm4) | 54,864 |  | PTM: Phosphorylated. |
| P09683 | Secretin | 13,016 |  |  |
| P19237 | Troponin I, slow skeletal muscle (Troponin I, slowtwitch isoform) | 21,692 |  |  |
| Q96RT6 | cTAGE family member 2 (Protein cTAGE-2) (Cancer/testis antigen 21.2) (CT21.2) | 85,282 |  |  |
| Q9H4A6 | Golgi phosphoprotein 3 (Coat protein GPP34) (Mitochondrial DNA absence factor) (MIDAS) | 33,811 |  | PTM: Phosphorylated |
| A5D8V6 | Vacuolar protein sorting-associated protein 37C (hVps37C) (ESCRT-I complex subunit VPS37C) | 38,659 |  | PTM: Phosphorylated by TBK1. |
| Q7Z4P5 | Growth/differentiation factor 7 (GDF-7) | 46,950 | N-linked (GlcNAc...) asparagine |  |
| Q6FHJ7 | Secreted frizzled-related protein 4 (sFRP-4) (Frizzled protein, human endometrium) (FrpHE) | 39,827 | N-linked (GlcNAc...) asparagine |  |
| Q8N782 | Zinc finger protein 525 | 23,070 |  |  |
| Q6IE37 | Ovostatin homolog 1 | 134,499 | N-linked (GlcNAc...) asparagine |  |
| Q99895 | Chymotrypsin-C (EC 3.4.21.2) (Caldecrin) | 29,484 | N-linked (GlcNAc...) asparagine |  |
| Q9H4Q3 | PR domain zinc finger protein 13 (EC 2.1.1.-) (PR domain-containing protein 13) | 73,981 |  |  |
| Q9NQX3 | Gephyrin [Includes: Molybdopterin <br> adenylyltransferase (MPT adenylyltransferase) (EC   <br> 2.7.7.75) $\quad$ (Domain $\quad$ G); Molybdopterin  <br> molybdenumtransferase (MPT Mo-transferase) (EC   <br> 2.10.1.1) (Domain E)]  | 79,748 |  | PTM: Palmitoylated <br> ECO:0000269\|PubMed:25025 $\text { 157\}. }$ |
| O43734 | E3 ubiquitin ligase TRAF3IP2 (EC 2.3.2.27) (Adapter protein CIKS) (Connection to IKK and SAPK/JNK) (E3 ubiquitin-protein ligase CIKS) (Nuclear factor NF-kappa-B activator 1) (ACT1) (TRAF3-interacting protein 2) | 64,666 |  |  |
| Q9H816 | 5' exonuclease Apollo (EC 3.1.-.-) (DNA cross-link repair 1B protein) (SNM1 homolog B) (SNMIB) (hSNM1B) | 60,002 |  | PTM: Ubiquitinated, leading to its degradation. Interaction with TERF2 protects it from ubiquitination. |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q96C01 | Protein FAM136A | 15,641 |  |  |
| C9JC47 | Putative protein FAM157A | 42,896 |  |  |
| Q7Z589 | BRCA2-interacting transcriptional repressor EMSY | 141,468 | O-linked (GlcNAc) serine | PTM: O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status. |
| Q9HBD1 | Roquin-2 (EC 2.3.2.27) (Membrane-associated nucleic acid-binding protein) (RING finger and CCCH-type zinc finger domain-containing protein 2) (RING finger protein 164) (RING-type E3 ubiquitin transferase Roquin-2) | 131,669 |  | PTM: Proteolytically cleaved after Arg-509 and Arg-585 by MALT1 in activated CD4(+) T cells |
| O15116 | $\begin{array}{llll}\text { U6 snRNA-associated } & \text { Sm-like } & \text { protein } & \text { LSm1 } \\ \text { (Cancer-associated } & \text { Sm-like) } & \text { (Small } & \text { nuclear }\end{array}$ ribonuclear CaSm) | 15,179 |  |  |
| P23193 | Transcription elongation factor A protein 1 (Transcription elongation factor S-II protein 1) (Transcription elongation factor TFIIS.o) | 33,970 |  |  |
| Q5SZD4 | Glycine N -acyltransferase-like protein 3 (EC 2.3.1.13) (Acyl-CoA:glycine-N-acyltransferase-like protein 3) | 32,704 |  |  |
| Q9UBM7 | 7-dehydrocholesterol reductase (7-DHC reductase) (EC 1.3.1.21) (Delta7-sterol reductase) (Sterol Delta(7)-reductase) (Sterol reductase SR-2) | 54,489 |  |  |
| Q9UMR7 | C-type lectin domain family 4 member A (C-type lectin DDB27) (C-type lectin superfamily member 6) (Dendritic cell immunoreceptor) (Lectin-like immunoreceptor) (CD antigen CD367) | 27,512 | N -linked (GlcNAc...) asparagine |  |
| Q92859 | Neogenin (Immunoglobulin superfamily DCC subclass member 2) | 160,017 | N-linked (GlcNAc...) asparagine |  |
| Q96H12 | Myb/SANT-like DNA-binding domain-containing protein 3 | 32,363 |  |  |
| Q9BV35 | Calcium-binding mitochondrial carrier protein SCaMC-3 (Mitochondrial ATP-Mg/Pi carrier protein 2) (Mitochondrial $\mathrm{Ca}(2+$ )-dependent solute carrier protein 2) (Small calcium-binding mitochondrial carrier protein 3) (Solute carrier family 25 member 23) | 52,378 |  |  |
| Q13610 | $\begin{array}{l}\text { Periodic tryptophan protein } \\ \text { (Keratinocyte protein IEF SSP 9502) }\end{array}$  | 55,828 |  |  |
| Q5T1N1 | Protein AKNAD1 | 92,864 |  |  |
| Q4VC05 | B-cell CLL/lymphoma 7 protein family member A | 22,810 |  |  |
| Q9BV44 | THUMP domain-containing protein 3 | 57,003 |  |  |
| O00622 | CCN family member 1 (Cellular communication network factor 1) (Cysteine-rich angiogenic inducer 61) (Insulin-like growth factor-binding protein 10) (IBP-10) (IGF-binding protein 10) (IGFBP-10) (Protein CYR61) (Protein GIG1) | 42,027 |  |  |
| Q9NSA0 | Solute carrier family 22 member 11 (Organic anion transporter 4) | 59,972 | N-linked (GlcNAc...) asparagine | PTM: N-glycosylated. Contains several complex-type N-glycans |
| O75063 | Glycosaminoglycan xylosylkinase (EC 2.7.1.-) (Xylose kinase) | 46,432 | N-linked (GlcNAc...) asparagine |  |
| Q8N635 | Meiosis-specific with OB domain-containing protein (EC 3.1.-.-) | 49,313 |  |  |
| Q8WV44 | E3 ubiquitin-protein ligase TRIM41 (EC 2.3.2.27) (RING finger-interacting protein with C kinase) (RINCK) (RING-type E3 ubiquitin transferase TRIM41) (Tripartite motif-containing protein 41) | 71,670 |  | PTM: Auto-ubiquitinated. |
| Q15435 | Protein phosphatase 1 regulatory subunit 7 (Protein phosphatase 1 regulatory subunit 22) | 41,564 |  |  |
| Q8N7R1 | POM121-like protein 12 | 31,848 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q9UH90 | F-box only protein 40 (Muscle disease-related protein) | 79,782 |  |  |
| Q6ZSS3 | Zinc finger protein 621 | 49,205 |  |  |
| Q5R3I4 | Tetratricopeptide repeat protein 38 (TPR repeat protein 38) | 52,787 |  |  |
| P30837 | Aldehyde dehydrogenase X , mitochondrial (EC 1.2.1.3) (Aldehyde dehydrogenase 5) (Aldehyde dehydrogenase family 1 member B1) | 57,206 |  |  |
| Q68DY1 | Zinc finger protein 626 | 60,893 |  |  |
| A6NES4 | Maestro heat-like repeat-containing protein family member 2A (HEAT repeat-containing protein 7B1) | 189,561 |  |  |
| Q96PP8 | Guanylate-binding protein 5 (EC 3.6.5.-) (GBP-TA antigen) (GTP-binding protein 5) (GBP-5) (Guanine nucleotide-binding protein 5) | 66,617 |  | PTM: Isoprenylation is required for proper subcellular location. |
| Q8TC71 | Mitochondria-eating protein (Spermatogenesis- <br> associated protein 18) | 61,109 |  |  |
| P19883 | Follistatin (FS) (Activin-binding protein) | 38,007 | N-linked (GlcNAc...) asparagine |  |
| Q9UPU9 | Protein Smaug homolog 1 (Smaug 1) (hSmaug1) (Sterile alpha motif domain-containing protein 4A) (SAM domain-containing protein 4A) | 79,415 |  |  |
| Q6IS24 | Polypeptide N -acetylgalactosaminyltransferase 17 (EC 2.4.1.41) (Polypeptide GalNAc transferase-like protein 3) (GalNAc-T-like protein 3) (pp-GaNTaselike <br> protein <br> 3) <br> (Protein-UDP <br> acetylgalactosaminyltransferase-like protein 3) (UDP-GalNAc:polypeptide acetylgalactosaminyltransferase-like protein 3) (Williams-Beuren syndrome chromosomal region 17 protein) | 67,751 | N-linked (GlcNAc...) asparagine |  |
| Q96SL8 | Flt3-interacting zinc finger protein 1 (Zinc finger protein 798) | 51,996 |  |  |
| Q9Y283 | Inversin (Inversion of embryo turning homolog) (Nephrocystin-2) | 117,826 |  | PTM: May be ubiquitinated via its interaction with APC2. |
| Q03111 | Protein ENL (YEATS domain-containing protein 1) | 62,056 |  |  |
| Q9H5Y7 | SLIT and NTRK-like protein 6 | 95,110 |  |  |
| Q9BRP7 | Ferredoxin-fold anticodon-binding domaincontaining protein 1 (FDX-ACDB domaincontaining protein 1) | 70,416 |  |  |
| Q63HQ2 | Pikachurin (Agrin-like protein) (EGF-like, fibronectin type-III and laminin G-like domaincontaining protein) | 111,271 | N -linked (GlcNAc...) asparagine | PTM: O-glycosylated; contains chondroitin sulfate and heparan sulfate. |
| Q8WTV1 | THAP domain-containing protein 3 | 27,059 |  |  |
| O94907 | Dickkopf-related protein 1 (Dickkopf-1) (Dkk-1) (hDkk-1) (SK) | 28,672 | O-linked (GlcNAc) serine |  |
| Q13884 | Beta-1-syntrophin (59 kDa dystrophin-associated protein A1 basic component 1) (DAPA1B) (BSYN2) (Syntrophin-2) (Tax interaction protein 43) (TIP-43) | 58,061 |  | PTM: Phosphorylated by CaMkinase II |
| P34059 | N-acetylgalactosamine-6-sulfatase (EC 3.1.6.4) (Chondroitinsulfatase) (Chondroitinase) (Galactose-6-sulfate sulfatase) (GalN6S) (N-acetylgalactosamine-6-sulfate sulfatase) (GalNAc6S sulfatase) | 58,026 | N-linked (GlcNAc...) asparagine | PTM: The conversion to 3oxoalanine (also known as Cformylglycine, FGly), of a serine or cysteine residue in prokaryotes and of a cysteine residue in eukaryotes, is critical for catalytic activity. |
| Q6GMR7 | Fatty-acid amide hydrolase 2 (EC 3.5.1.99) (Amidase domain-containing protein) (Anandamide amidohydrolase 2) (Oleamide hydrolase 2) | 58,304 |  |  |
| Q9ULB5 | Cadherin-7 | 87,086 | N-linked (GlcNAc...) asparagine |  |
| Q96L33 | Rho-related GTP-binding protein RhoV (CDC42like GTPase 2) (GTP-binding protein-like 2) (Rho GTPase-like protein ARHV) (Wnt-1 responsive Cdc42 homolog 2) (WRCH-2) | 26,217 |  |  |


| Protein ID | Protein names | Mass | Glycosylation | Post-translational modification |
| :---: | :---: | :---: | :---: | :---: |
| Q8NGI2 | Olfactory receptor 52N4 (Olfactory receptor OR1164) | 36,080 | N-linked (GlcNAc...) asparagine |  |
| P19022 | Cadherin-2 (CDw325) (Neural cadherin) (Ncadherin) (CD antigen CD325) | 99,809 | N-linked (GlcNAc...) asparagine | PTM: Cleaved by MMP24 |
| Q9NQ11 | Polyamine-transporting ATPase 13A2 (EC 7.6.2.-) | 128,794 | N-linked (GlcNAc...) asparagine | PTM: Autophosphorylated |
| P60852 | Zona pellucida sperm-binding protein 1 (Zona pellucida glycoprotein 1) (Zp-1) [Cleaved into: Processed zona pellucida sperm-binding protein 1] | 70,049 | N -linked (GlcNAc...) asparagine |  |
| O14863 | Zinc transporter 4 (ZnT-4) (Solute carrier family 30 member 4) | 47,483 |  |  |
| Q6P0Q8 | Microtubule-associated serine/threonine-protein kinase 2 (EC 2.7.11.1) | 196,436 |  | PTM: Phosphorylated and ubiquitinated |
| Q53EU6 | Glycerol-3-phosphate acyltransferase 3 (GPAT-3) (EC 2.3.1.15) (1-acyl-sn-glycerol-3-phosphate Oacyltransferase 10) (AGPAT 10) (1-acyl-sn-glycerol-3-phosphate O-acyltransferase 9) (1-AGP acyltransferase 9) (1-AGPAT 9) (EC 2.3.1.51) (Acyl-CoA:glycerol-3-phosphate acyltransferase 3) (hGPAT3) (Lung cancer metastasis-associated protein 1) (Lysophosphatidic acid acyltransferase theta) (LPAAT-theta) (MAG-1) | 48,705 |  |  |
| Q9H4A4 | Aminopeptidase B (AP-B) (EC 3.4.11.6) (Arginine aminopeptidase) (Arginyl aminopeptidase) | 72,596 |  |  |
| P12821 | Angiotensin-converting enzyme (ACE) (EC 3.2.1.-) (EC 3.4.15.1) (Dipeptidyl carboxypeptidase I) (Kininase II) (CD antigen CD143) [Cleaved into: Angiotensin-converting enzyme, soluble form] | 149,715 | N -linked (GlcNAc...) asparagine | PTM: Phosphorylated by CK2 on Ser-1299; which allows membrane retention. |
| Q9H6U8 | Alpha-1,2-mannosyltransferase ALG9   <br> 2.4.1.259) (EC (EC 2.4.1.261) (Asparagine-linked <br> glycosylation protein 9 homolog) (Disrupted in   <br> bipolar disorder protein 1) (Dol-P-  <br> Man:Man(6)GlcNAc(2)-PP-Dol  alpha-1,2-  <br> mannosyltransferase)  (Dol-P-  <br> Man:Man(8)GlcNAc(2)-PP-Dol  alpha-1,2-  <br> mannosyltransferase)    | 69,863 | N -linked (GlcNAc...) asparagine |  |
| Q7Z6G8 | Ankyrin repeat and sterile alpha motif domaincontaining protein 1B (Amyloid-beta protein intracellular domain-associated protein 1) (AIDA-1) (E2A-PBX1-associated protein) (EB-1) | 138,066 |  | PTM: Isoform 3 nuclear translocation requires an NMDAR-dependent proteolytic cleavage. |
| Q9Y2Z9 | Ubiquinone biosynthesis monooxygenase COQ6, mitochondrial (EC 1.14.13.-) (Coenzyme Q10 monooxygenase 6) | 50,870 |  |  |
| Q12906 | Interleukin enhancer-binding factor 3 (Doublestranded RNA-binding protein 76) (DRBP76) (Mphase phosphoprotein 4) (MPP4) (Nuclear factor associated with dsRNA) (NFAR) (Nuclear factor of activated T-cells 90 kDa) (NF-AT-90) (Translational control protein 80) (TCP80) | 95,338 |  |  |
| Q9GZN2 | Homeobox protein TGIF2 (5'-TG-3'-interacting factor 2) (TGF-beta-induced transcription factor 2) (TGFB-induced factor 2) | 25,878 |  | PTM: The C-terminal part is phosphorylated in response to EGF signaling by the Ras/MAPK pathway. |
| Q8N0Z6 | Tetratricopeptide repeat protein 5 (TPR repeat protein 5) (Stress-responsive activator of p300) (Strap) | 48,928 |  | PTM: Phosphorylation at Ser203 enhances protein stability, regulates nuclear accumulation and association with p300/EP300. |

