



PQ500™ Reference Peptides Kit

for Human Samples

MANUAL

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PQ500™ Reference Peptides Kit Panel Components

PQ500™ Reference Peptides Kit	Part No: Ki-3019-24 / -48 / -96 Sufficient for analysis of 24, 48 or 96 samples in standard applications
PQ500 Reference Peptides	1x, 2x or 4x 1.1 ml glass vial(s), clear cap
LC Solution	1x 2 ml tube, clear cap
Dissolution Buffer	1x 2 ml tube, light blue cap
PQ500™ Panel Plug-ins for SpectroDive™ or Spectronaut™	Available upon request at support@biognosys.com
PQ500™ reference peptides amounts, mass and transition list	Available upon request at support@biognosys.com
PQ500™ Reference Peptides Kit Manual	Available at www.biognosys.com/shop/PQ500-reference-peptides

Storage and Quality Control of PQ500™ Reference Peptides Kit

Immediately after receiving the kit store:

- ◆ Reference Peptide Mix at **-20 °C**
- ◆ All other components should be stored at 2 - 8 °C

In accordance with Biognosys' Quality Management System, each lot of the kit is tested against predetermined specifications to ensure consistent product quality.

Use Limitations

PQ500™ Reference Peptides Kit is intended for mass spectrometry proteomics applications and research use only. This product is not intended for the diagnosis, prevention, or treatment of a disease. All due care and attention should be exercised in the handling of the products.

Product Warranty and Satisfaction Guarantee

Biognosys guarantees the performance of the product when following the instructions and protocols described in this product manual. However, the user must determine the suitability of the product for the intended use. Should the product fail to perform satisfactorily due to any reason other than misuse, Biognosys will replace it free of charge. Biognosys reserves the right to change, alter, or modify the product to enhance its performance and design at any time.

If you have questions about product specifications or performance, please contact us at support@biognosys.com. We also encourage you to contact us if you have any suggestions for improving product performance or for its use in new applications and techniques.

Technical Assistance

Our Technical Department is composed of experienced scientists with extensive practical and theoretical expertise in proteomic technologies and bioinformatics. If you have any questions or experience any difficulties with PQ500™ Reference Peptides Kit please do not hesitate to contact us at support@biognosys.com, call +41 44 738 20 40 or visit www.biognosys.com/shop/PQ500-reference-peptides.

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the material safety data sheet (MSDS) available online in convenient and compact PDF format at www.biognosys.com/shop/PQ500-reference-peptides.

The following risk and safety phrases apply to components of the PQ500™ Reference Peptides Kit:

Dissolution Buffer: Highly flammable liquid and vapour, causes serious eye irritation.

Introduction: The PQ500™ Panel at a Glance

Liquid biopsies, especially blood derived plasma or serum, are the most frequently used biological sample in clinical research and routine laboratory diagnostics. Protein levels in these samples reflect the health status of single organs and the body as a whole, while changes in the proteome composition can be correlated to disease onset or therapy response. Often the changes in protein concentrations relative to each other are key indicators of a certain condition. Only monitoring the levels of all major protein components simultaneously makes it possible to recognize the “Big Picture” and explain pathological processes going on in the body.

The PQ500™ Assay Panel was designed for comprehensive proteomics approaches. Data can be acquired in a targeted fashion, i.e. via Multiple Reaction Monitoring (MRM, also called SRM) and Parallel Reaction Monitoring (PRM) – which focus on quantifying predefined sets of proteins with high sensitivity and reproducibility. Biognosys is unique in its ability to perform scheduled highly multiplexed MRM and PRM measurements based on its innovative iRT concept and specifically developed the MRM and PRM signal processing software – SpectroDive™. Alternatively, PQ500™ data can be extracted in a targeted fashion from discovery data acquisition approaches, i.e. data-independent acquisition (DIA). This unique combined targeted-discovery data analysis approach is integrated in Spectronaut™, the Biognosys software solution for all kinds of DIA acquisition. The PQ500™ kit includes a reference peptide mix that allows users to measure absolute concentrations of the target proteins. Absolute concentrations allow the comparability of different sample sets on an epidemiological scale, independent of the relative comparisons within the sample set.

The PQ500™ protocol requires as little as 10 µl of plasma and 48 hours to provide to provide actionable clinically-relevant data. The panel is therefore a perfect solution for large-scale experiments requiring high throughput.

The complete PQ500™ workflow was designed to be an end-to-end solution, from a plasma sample to actionable results. While the PQ500™ Reference Peptide Mix is a key component, the full workflow additionally includes Sample Preparation Kit Pro (Ki-3013) for reproducible proteomic sample processing in a high throughput fashion. Additionally, Biognosys provides accompanying high-end software solutions, SpectroDive™ (Sw-3002), its` proprietary software for automated SRM/MRM and PRM method set-up, signal processing and experiment analysis and Spectronaut™ (Sw-3001) the cutting-edge solution for DIA data analysis. Visit www.biognosys.com/shop/ for additional information.

Important Notes before Starting

Before starting with the sample preparation, read through all the steps carefully and make sure all the required reagents and equipment are available.

The kit components are sufficient for 24 (Ki-3019-24), 48 (Ki-3019-48) or 96 (Ki-3016-96) human samples.

The PQ500™ Reference Peptides Kit does only contain reference peptide mix, including iRT peptides, and buffers to solubilize these. All aspects (buffers or protocols) of sample processing, method set-up and data analysis are NOT covered in the scope of this kit. If you need information on these subjects, send an inquiry to support@biognosys.com or refer to the Biognosys online shop (www.biognosys.com/shop/), where you can find information about sample preparation, e.g. Sample Preparation Kit Pro (www.biognosys.com/shop/sample-preparation-kit-pro) or data analysis (www.biognosys.com/shop#software).

Additionally Required Laboratory Equipment and Consumables

Single channel pipettes (0.5 µl – 1000 µl) with corresponding tips

LC-MS vials

Vortex mixer

Optional: Ultra-sonication device (sonication bath)

Reference Peptide Kit Usage and Recommended Sample Preparation

1. Prepare **PQ500 Reference Peptide Mix** by adding to the glass vial 20 µl of **Dissolution Buffer**.
2. Vortex briefly.

Optional: Sonicate (sonication bath) for 5 min

3. Add 100 µl of **LC Solution** to the **PQ500 Reference Peptide Mix**.
4. Vortex the **PQ500 Reference Peptide Mix** thoroughly.

Repeat these 4 steps for each PQ500 Reference Peptides vial.

If more than 24 samples are processed in one sample set, it is recommended to pool the appropriate amounts of PQ500 Reference Peptides vials before usage.

Recommended spike-in amounts to be compatible with the PQ500™ workflow in a standard nano-flow LC-MS set-up including the automated analysis with Biognosys software (SpectroDive™ or Spectronaut™):

1. Dissolve dried or dilute ready-to-inject processed plasma samples to a final concentration of 0.88 µg/µl with an LC-MS compatible buffer (*not included in this kit*).

2. Vortex or, if possible, sonicate the samples.
3. Centrifuge the dissolved samples at 4°C and maximum speed for 20 min.
4. Transfer 12 µl of sample supernatants to LC-MS vials; store remaining samples at -20°C for future analysis.
5. Add 4 µl/sample of **Reference Peptide Mix** to each LC-MS vial.
6. Inject 3 µl/sample for all LC-MS measurements (corresponds to about 2 µg of sample peptides per injection)

If you require recommended spike-in levels for your specific LC-MS set-up or any additional information to set-up your method of choice with PQ500™ Reference Peptides (e.g. peptide amounts, mass list, transition list), please send an inquiry to support@biognosys.com.

Troubleshooting Guide

This troubleshooting guide may be helpful in solving issues that may arise.

Issue	Possible Cause	Recommended Solution
The first iRT peptide behaves irregularly	LC gradient starts with > 1% AcN	Because of the high peptide hydrophilicity slight irregularities of the first iRT peptide behaviour still can be observed. This usually does not influence the quality of calibration.
iRT calibration is not linear	Non-linear gradient was used	Use linear gradient and LC settings
	A minor issue in chromatographic system if there are only 1 or 2 outliers from linearity	Check manually if respective iRT peaks are correctly integrated and if the peak shapes are satisfactory. If not, exclude outliers from calibration by clicking on “Edit...” in ‘2) Choose LC calibration’ section.
	A major defect in chromatographic system if iRT calibration is not linear through the whole range	Please contact the technical support of the LC manufacturer.

Issue	Possible Cause	Recommended Solution
No signal on LC-MS when analyzing samples	Problem with sample preparation	Prepare and analyse a control sample with Reference Peptide Mix diluted in LC Buffer (keep the dilution rate this protocol). If you see a signal on LC-MS your initial samples were not prepared correctly.
	Problem with the LC-MS system	If you don't see any signal on your LC-MS after analysing the control sample from above please contact the technical support of your LC-MS vendor.

List of Proteins Covered by PQ500 Reference Peptides

Entry Name	Uniprot ID	Description
1433E_HUMAN	P62258	14-3-3 protein epsilon
1433G_HUMAN	P61981	14-3-3 protein gamma
1433Z_HUMAN	P63104	14-3-3 protein zeta/delta
4F2_HUMAN	P08195	4F2 cell-surface antigen heavy chain (CD antigen CD98)
A1AG1_HUMAN	P02763	Alpha-1-acid glycoprotein 1 (AGP 1)
A1AG2_HUMAN	P19652	Alpha-1-acid glycoprotein 2 (AGP 2)
A1AT_HUMAN	P01009	Alpha-1-antitrypsin (Serpins A1)
A1BG_HUMAN	P04217	Alpha-1B-glycoprotein
A2AP_HUMAN	P08697	Alpha-2-antiplasmin (Serpins F2)
A2GL_HUMAN	P02750	Leucine-rich alpha-2-glycoprotein (LRG)
A2MG_HUMAN	P01023	Alpha-2-macroglobulin
A4_HUMAN	P05067	Amyloid-beta A4 protein (ABPP; APP)
AACT_HUMAN	P01011	Alpha-1-antichymotrypsin (Serpins A3)
AATC_HUMAN	P17174	Aspartate aminotransferase (Transaminase A)
ABCF1_HUMAN	Q8NE71	ATP-binding cassette sub-family F member 1
ACTN1_HUMAN	P12814	Alpha-actinin-1
ADH4_HUMAN	P08319	Alcohol dehydrogenase 4
ADIPO_HUMAN	Q15848	Adiponectin
AEBP1_HUMAN	Q8IUX7	Adipocyte enhancer-binding protein 1
AFAM_HUMAN	P43652	Afamin
AGRG6_HUMAN	Q86SQ4	Adhesion G-protein coupled receptor G6 (GPR126)
ALBU_HUMAN	P02768	Serum albumin
ALDOA_HUMAN	P04075	Fructose-bisphosphate aldolase A
ALDOB_HUMAN	P05062	Fructose-bisphosphate aldolase B
ALDOC_HUMAN	P09972	Fructose-bisphosphate aldolase C
ALDR_HUMAN	P15121	Aldose reductase (AR)

ALS_HUMAN	P35858	Insulin-like growth factor-binding protein complex acid labile subunit (ALS)
AMBP_HUMAN	P02760	Protein AMBP
AMPN_HUMAN	P15144	Aminopeptidase N (CD antigen CD13)
ANAG_HUMAN	P54802	Alpha-N-acetylglucosaminidase (NAG)
ANGI_HUMAN	P03950	Angiogenin
ANGL3_HUMAN	Q9Y5C1	Angiopietin-related protein 3 (Angiopietin-5)
ANGT_HUMAN	P01019	Angiotensinogen (Serpine A8)
ANT3_HUMAN	P01008	Antithrombin-III (ATIII) (Serpine C1)
ANTR2_HUMAN	P58335	Anthrax toxin receptor 2 (CMG-2)
ANXA1_HUMAN	P04083	Annexin A1
ANXA3_HUMAN	P12429	Annexin A3
AOC3_HUMAN	Q16853	Membrane primary amine oxidase (VAP-1)
APMAP_HUMAN	Q9HDC9	Adipocyte plasma membrane-associated protein
APOA_HUMAN	P08519	Apolipoprotein(a) (Lp(a))
APOA1_HUMAN	P02647	Apolipoprotein A-I (Apo-AI)
APOA2_HUMAN	P02652	Apolipoprotein A-II (Apo-AII)
APOA4_HUMAN	P06727	Apolipoprotein A-IV (Apo-AIV)
APOA5_HUMAN	Q6Q788	Apolipoprotein A-V (Apo-AV)
APOB_HUMAN	P04114	Apolipoprotein B-100 (Apo B-100)
APOC1_HUMAN	P02654	Apolipoprotein C-I (Apo-CI)
APOC2_HUMAN	P02655	Apolipoprotein C-II (Apo-CII)
APOC3_HUMAN	P02656	Apolipoprotein C-III (Apo-CIII)
APOC4_HUMAN	P55056	Apolipoprotein C-IV (Apo-CIV)
APOD_HUMAN	P05090	Apolipoprotein D (Apo-D)
APOE_HUMAN	P02649	Apolipoprotein E (Apo-E)
APOF_HUMAN	Q13790	Apolipoprotein F (Apo-F; LTIP)
APOH_HUMAN	P02749	Beta-2-glycoprotein 1
APOL1_HUMAN	O14791	Apolipoprotein L1 (Apo-L)
APOM_HUMAN	O95445	Apolipoprotein M (Apo-M)
ASSY_HUMAN	P00966	Argininosuccinate synthase
ATL4_HUMAN	Q6UY14	ADAMTS-like protein 4 (ADAMTSL-4)
ATRN_HUMAN	O75882	Attractin (DPPT-L)
ATS13_HUMAN	Q76LX8	A disintegrin and metalloproteinase with thrombospondin motifs 13 (ADAM-TS13)
ATS4_HUMAN	O75173	A disintegrin and metalloproteinase with thrombospondin motifs 4 (ADAM-TS4)
B2MG_HUMAN	P61769	Beta-2-microglobulin
B3AT_HUMAN	P02730	Band 3 anion transport protein (CD antigen CD233)
B3GN2_HUMAN	Q9NY97	N-acetyllactosaminide beta-1,3-N-acetylglucosaminyltransferase 2
B4GA1_HUMAN	O43505	Beta-1,4-glucuronyltransferase 1
BASP1_HUMAN	P80723	Brain acid soluble protein 1 (NAP-22)
BDNF_HUMAN	P23560	Brain-derived neurotrophic factor (BDNF)
BGH3_HUMAN	Q15582	Transforming growth factor-beta-induced protein ig-h3
BLVRB_HUMAN	P30043	Flavin reductase (NADPH)
BPIB2_HUMAN	Q8N4F0	BPI fold-containing family B member 2

BST1_HUMAN	Q10588	ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 2 (CD antigen CD157)
BTD_HUMAN	P43251	Biotinidase (Biotinase)
C163A_HUMAN	Q86VB7	Scavenger receptor cysteine-rich type 1 protein M130 (CD antigen CD163)
C1QA_HUMAN	P02745	Complement C1q subcomponent subunit A
C1QB_HUMAN	P02746	Complement C1q subcomponent subunit B
C1QC_HUMAN	P02747	Complement C1q subcomponent subunit C
C1QR1_HUMAN	Q9NPY3	Complement component C1q receptor (CD antigen CD93)
C1QT3_HUMAN	Q9BXJ4	Complement C1q tumor necrosis factor-related protein 3 (CORS26)
C1QT4_HUMAN	Q9BXJ3	Complement C1q tumor necrosis factor-related protein 4
C1R_HUMAN	P00736	Complement C1r subcomponent
C1RL_HUMAN	Q9NZP8	Complement C1r subcomponent-like protein (C1r-LP)
C1S_HUMAN	P09871	Complement C1s subcomponent
C4BPA_HUMAN	P04003	C4b-binding protein alpha chain (C4bp)
C4BPB_HUMAN	P20851	C4b-binding protein beta chain
CA2D1_HUMAN	P54289	Voltage-dependent calcium channel subunit alpha-2/delta-1
CAD13_HUMAN	P55290	Cadherin-13
CADH1_HUMAN	P12830	Cadherin-1 (E-cadherin; CD antigen CD324)
CADH2_HUMAN	P19022	Cadherin-2 (N-cadherin; CD antigen CD325)
CADH5_HUMAN	P33151	Cadherin-5 (VE-cadherin; CD antigen CD144)
CAH1_HUMAN	P00915	Carbonic anhydrase 1 (CA-I)
CAH2_HUMAN	P00918	Carbonic anhydrase 2 (CA-II)
CAH3_HUMAN	P07451	Carbonic anhydrase 3 (CA-III)
CALR_HUMAN	P27797	Calreticulin
CALX_HUMAN	P27824	Calnexin
CAMP_HUMAN	P49913	Cathelicidin antimicrobial peptide
CAN1_HUMAN	P07384	Calpain-1 catalytic subunit
CAP1_HUMAN	Q01518	Adenylyl cyclase-associated protein 1 (CAP 1)
CARD9_HUMAN	Q9H257	Caspase recruitment domain-containing protein 9 (hCARD9)
CASPE_HUMAN	P31944	Caspase-14 (CASP-14)
CATA_HUMAN	P04040	Catalase
CATB_HUMAN	P07858	Cathepsin B (APP secretase)
CATD_HUMAN	P07339	Cathepsin D
CATS_HUMAN	P25774	Cathepsin S
CATZ_HUMAN	Q9UBR2	Cathepsin Z (Cathepsin X)
CBG_HUMAN	P08185	Corticosteroid-binding globulin (Serpins A6)
CBPB2_HUMAN	Q96IY4	Carboxypeptidase B2 (pCPB)
CBPE_HUMAN	P16870	Carboxypeptidase E (CPE)
CBPN_HUMAN	P15169	Carboxypeptidase N catalytic chain (CPN)
CBPQ_HUMAN	Q9Y646	Carboxypeptidase Q
CCL14_HUMAN	Q16627	C-C motif chemokine 14

CD109_HUMAN	Q6YHK3	CD109 antigen (CD antigen CD109)
CD14_HUMAN	P08571	Monocyte differentiation antigen CD14 (CD antigen CD14)
CD166_HUMAN	Q13740	CD166 antigen (Activated leukocyte cell adhesion molecule; CD antigen CD166)
CD248_HUMAN	Q9HCU0	Endosialin (Tumor endothelial marker 1; CD antigen CD248)
CD44_HUMAN	P16070	CD44 antigen (Hyaluronate receptor; CD antigen CD44)
CD59_HUMAN	P13987	CD59 glycoprotein (Protectin; CD antigen CD59)
CD5L_HUMAN	O43866	CD5 antigen-like
CD9_HUMAN	P21926	CD9 antigen (Tetraspanin-29; CD antigen CD9)
CD99_HUMAN	P14209	CD99 (T-cell surface glycoprotein E2; CD antigen CD99)
CDHR5_HUMAN	Q9HBB8	Cadherin-related family member 5
CEAM5_HUMAN	P06731	Carcinoembryonic antigen-related cell adhesion molecule 5 (CEA; CD antigen CD66e)
CEMIP_HUMAN	Q8WUJ3	Cell migration-inducing and hyaluronan-binding protein
CERU_HUMAN	P00450	Ceruloplasmin (Ferroxidase)
CETP_HUMAN	P11597	Cholesteryl ester transfer protein (Lipid transfer protein I)
CFAB_HUMAN	P00751	Complement factor B (C3/C5 convertase)
CFAD_HUMAN	P00746	Complement factor D (Adipsin)
CFAH_HUMAN	P08603	Complement factor H
CFAI_HUMAN	P05156	Complement factor I (C3B/C4B inactivator)
CGL_HUMAN	P32929	Cystathionine gamma-lyase
CH3L1_HUMAN	P36222	Chitinase-3-like protein 1
CHIT1_HUMAN	Q13231	Chitotriosidase-1 (Chitinase-1)
CHLE_HUMAN	P06276	Cholinesterase
CLIC1_HUMAN	O00299	Chloride intracellular channel protein 1
CLUS_HUMAN	P10909	Clusterin (Apolipoprotein J; Apo-J)
CMGA_HUMAN	P10645	Chromogranin-A (CgA; SP-I)
CNDP1_HUMAN	Q96KN2	Beta-Ala-His dipeptidase (Serum carnosinase)
CNTF_HUMAN	P26441	Ciliary neurotrophic factor (CNTF)
CNTN1_HUMAN	Q12860	Contactin-1 (Glycoprotein gp135) (Neural cell surface protein F3)
CO2_HUMAN	P06681	Complement C2 (C3/C5 convertase)
CO3_HUMAN	P01024	Complement C3
CO4A_HUMAN	P0C0L4	Complement C4-A
CO4B_HUMAN	P0C0L5	Complement C4-B
CO5_HUMAN	P01031	Complement C5
CO6_HUMAN	P13671	Complement component C6
CO6A2_HUMAN	P12110	Collagen alpha-2(VI) chain
CO6A3_HUMAN	P12111	Collagen alpha-3(VI) chain
CO7_HUMAN	P10643	Complement component C7
CO8A_HUMAN	P07357	Complement component C8 alpha chain
CO8B_HUMAN	P07358	Complement component C8 beta chain
CO8G_HUMAN	P07360	Complement component C8 gamma chain
CO9_HUMAN	P02748	Complement component C9

COF1_HUMAN	P23528	Cofilin-1
COIA1_HUMAN	P39060	Collagen alpha-1(XVIII) chain
COL10_HUMAN	Q9Y6Z7	Collectin-10 (CL-L1)
COL11_HUMAN	Q9BWP8	Collectin-11 (CL-K1)
COMP_HUMAN	P49747	Cartilage oligomeric matrix protein (Thrombospondin-5)
CPN2_HUMAN	P22792	Carboxypeptidase N subunit 2
CPNS1_HUMAN	P04632	Calpain small subunit 1
CRAC1_HUMAN	Q9NQ79	Cartilage acidic protein 1
CRF_HUMAN	P06850	Corticoliberin
CRHBP_HUMAN	P24387	Corticotropin-releasing factor-binding protein
CRIS3_HUMAN	P54108	Cysteine-rich secretory protein 3
CRP_HUMAN	P02741	C-reactive protein (CRP)
CSF1_HUMAN	P09603	Macrophage colony-stimulating factor 1 (CSF-1; M-CSF)
CSF1R_HUMAN	P07333	Macrophage colony-stimulating factor 1 receptor (CSF-1 receptor; CD antigen CD115)
CSTN1_HUMAN	O94985	Calsyntenin-1
CXCL7_HUMAN	P02775	Platelet basic protein (PBP; C-X-C motif chemokine 7)
CYTB_HUMAN	P04080	Cystatin-B (CPI-B; Stefin-B)
CYTC_HUMAN	P01034	Cystatin-C (Cystatin-3)
DAF_HUMAN	P08174	Complement decay-accelerating factor (CD antigen CD55)
DAG1_HUMAN	Q14118	Dystroglycan (Dystrophin-associated glycoprotein 1)
DCD_HUMAN	P81605	Dermcidin
DIAC_HUMAN	Q01459	Di-N-acetylchitobiase
DLK1_HUMAN	P80370	Protein delta homolog 1 (DLK-1)
DOPO_HUMAN	P09172	Dopamine beta-hydroxylase
DPEP2_HUMAN	Q9H4A9	Dipeptidase 2
DPP4_HUMAN	P27487	Dipeptidyl peptidase 4 (DPP IV; CD antigen CD26)
DSG2_HUMAN	Q14126	Desmoglein-2
ECM1_HUMAN	Q16610	Extracellular matrix protein 1
EGF_HUMAN	P01133	Pro-epidermal growth factor (EGF)
EGFR_HUMAN	P00533	Epidermal growth factor receptor (Proto-oncogene c-ErbB-1)
EGLN_HUMAN	P17813	Endoglin (CD antigen CD105)
ENOA_HUMAN	P06733	Alpha-enolase (Plasminogen-binding protein)
ENOG_HUMAN	P09104	Gamma-enolase
ENPL_HUMAN	P14625	Endoplasmin (Tumor rejection antigen 1)
ENPP2_HUMAN	Q13822	Ectonucleotide pyrophosphatase/phosphodiesterase family member 2 (E-NPP 2; Autotaxin)
EPCR_HUMAN	Q9UNN8	Endothelial protein C receptor (CD antigen CD201)
EPHA1_HUMAN	P21709	Ephrin type-A receptor 1 (hEpha1)
ERAP1_HUMAN	Q9NZ08	Endoplasmic reticulum aminopeptidase 1 (ARTS-1)
ERBB2_HUMAN	P04626	Receptor tyrosine-protein kinase erbB-2 (Proto-oncogene c-ErbB-2; CD antigen CD340)
ERN1_HUMAN	O75460	Serine/threonine-protein kinase/endoribonuclease IRE1 (IRE1a)

F13A_HUMAN	P00488	Coagulation factor XIII A chain (Transglutaminase A chain)
F13B_HUMAN	P05160	Coagulation factor XIII B chain (Transglutaminase B chain)
FA10_HUMAN	P00742	Coagulation factor X
FA11_HUMAN	P03951	Coagulation factor XI
FA12_HUMAN	P00748	Coagulation factor XII
FA5_HUMAN	P12259	Coagulation factor V
FA7_HUMAN	P08709	Coagulation factor VII (Serum prothrombin conversion accelerator)
FA9_HUMAN	P00740	Coagulation factor IX
FAAA_HUMAN	P16930	Fumarylacetoacetase (FAA)
FAM3C_HUMAN	Q92520	Protein FAM3C (Interleukin-like EMT inducer)
FBLN1_HUMAN	P23142	Fibulin-1 (FIBL-1)
FBLN3_HUMAN	Q12805	EGF-containing fibulin-like extracellular matrix protein 1 (FIBL-3)
FBLN5_HUMAN	Q9UBX5	Fibulin-5 (FIBL-5)
FBLN7_HUMAN	Q53RD9	Fibulin-7 (FIBL-7)
FBN1_HUMAN	P35555	Fibrillin-1
FCG2A_HUMAN	P12318	Low affinity immunoglobulin gamma Fc region receptor II-a (CD antigen CD32)
FCG3A_HUMAN	P08637	Low affinity immunoglobulin gamma Fc region receptor III-A (CD antigen CD16a)
FCG3B_HUMAN	O75015	Low affinity immunoglobulin gamma Fc region receptor III-B (CD antigen CD16b)
FCGBP_HUMAN	Q9Y6R7	IgGFc-binding protein
FCN2_HUMAN	Q15485	Ficolin-2
FCN3_HUMAN	O75636	Ficolin-3
FETUA_HUMAN	P02765	Alpha-2-HS-glycoprotein (Fetuin-A)
FETUB_HUMAN	Q9UGM5	Fetuin-B
FGFP2_HUMAN	Q9BYJ0	Fibroblast growth factor-binding protein 2
FGL1_HUMAN	Q08830	Fibrinogen-like protein 1
FHAD1_HUMAN	B1AJZ9	Forkhead-associated domain-containing protein 1
FHR1_HUMAN	Q03591	Complement factor H-related protein 1 (FHR-1)
FHR2_HUMAN	P36980	Complement factor H-related protein 2 (FHR-2)
FHR3_HUMAN	Q02985	Complement factor H-related protein 3 (FHR-3)
FHR4_HUMAN	Q92496	Complement factor H-related protein 4 (FHR-4)
FHR5_HUMAN	Q9BXR6	Complement factor H-related protein 5 (FHR-5)
FIBA_HUMAN	P02671	Fibrinogen alpha chain
FIBB_HUMAN	P02675	Fibrinogen beta chain
FIBG_HUMAN	P02679	Fibrinogen gamma chain
FINC_HUMAN	P02751	Fibronectin (FN)
FLNA_HUMAN	P21333	Filamin-A (FLN-A; Filamin-1) (
FOLR1_HUMAN	P15328	Folate receptor alpha (FR-alpha)
FREM3_HUMAN	P0C091	FRAS1-related extracellular matrix protein 3
FRIL_HUMAN	P02792	Ferritin light chain (Ferritin L subunit)
FUCO2_HUMAN	Q9BTY2	Plasma alpha-L-fucosidase

G3P_HUMAN	P04406	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH)
G6PE_HUMAN	O95479	GDH/6PGL endoplasmic bifunctional protein
G6PI_HUMAN	P06744	Glucose-6-phosphate isomerase (GPI)
GANAB_HUMAN	Q14697	Neutral alpha-glucosidase AB
GAPR1_HUMAN	Q9H4G4	Golgi-associated plant pathogenesis-related protein 1 (GAPR-1)
GAS6_HUMAN	Q14393	Growth arrest-specific protein 6 (GAS-6; AXL receptor tyrosine kinase ligand)
GDIR2_HUMAN	P52566	Rho GDP-dissociation inhibitor 2
GELS_HUMAN	P06396	Gelsolin (Brevin)
GFAP_HUMAN	P14136	Glial fibrillary acidic protein (GFAP)
GGH_HUMAN	Q92820	Gamma-glutamyl hydrolase
GIP_HUMAN	P09681	Gastric inhibitory polypeptide (GIP; Incretin hormone)
GNPTG_HUMAN	Q9UJJ9	N-acetylglucosamine-1-phosphotransferase subunit gamma
GP1BA_HUMAN	P07359	Platelet glycoprotein Ib alpha chain (CD antigen CD42b)
GPV_HUMAN	P40197	Platelet glycoprotein V (CD antigen CD42d)
GPX3_HUMAN	P22352	Glutathione peroxidase 3 (GPx-3)
GRP75_HUMAN	P38646	Stress-70 protein (75 kDa glucose-regulated protein)
GRP78_HUMAN	P11021	Endoplasmic reticulum chaperone BiP
GSG1_HUMAN	Q2KHT4	Germ cell-specific gene 1 protein
GSTO1_HUMAN	P78417	Glutathione S-transferase omega-1
HABP2_HUMAN	Q14520	Hyaluronan-binding protein 2
HBA_HUMAN	P69905	Hemoglobin subunit alpha (Alpha-globin)
HBB_HUMAN	P68871	Hemoglobin subunit beta (Beta-globin)
HBD_HUMAN	P02042	Hemoglobin subunit delta (Delta-globin)
HBE_HUMAN	P02100	Hemoglobin subunit epsilon (Epsilon-globin)
HBM_HUMAN	Q6B0K9	Hemoglobin subunit mu (Mu-globin)
HCFC1_HUMAN	P51610	Host cell factor 1 (HCF-1)
HEG1_HUMAN	Q9ULI3	Protein HEG homolog 1
HEM2_HUMAN	P13716	Delta-aminolevulinic acid dehydratase
HEMO_HUMAN	P02790	Hemopexin (Beta-1B-glycoprotein)
HEP2_HUMAN	P05546	Heparin cofactor 2 (Serpins D1)
HGFA_HUMAN	Q04756	Hepatocyte growth factor activator (HGFA)
HGFL_HUMAN	P26927	Hepatocyte growth factor-like protein (Macrophage stimulatory protein)
HORN_HUMAN	Q86YZ3	Hornerin
HPT_HUMAN	P00738	Haptoglobin
HPTR_HUMAN	P00739	Haptoglobin-related protein
HRG_HUMAN	P04196	Histidine-rich glycoprotein (Histidine-proline-rich glycoprotein) (HPRG)
HS12A_HUMAN	O43301	Heat shock 70 kDa protein 12A
HS71L_HUMAN	P34931	Heat shock 70 kDa protein 1-like
HS74L_HUMAN	O95757	Heat shock 70 kDa protein 4L
HS90B_HUMAN	P08238	Heat shock protein HSP 90-beta (HSP 90)
HSP71_HUMAN	P08107	Heat shock 70 kDa protein 1
HSP74_HUMAN	P34932	Heat shock 70 kDa protein 4

HSP76_HUMAN	P17066	Heat shock 70 kDa protein 6
HSP7C_HUMAN	P11142	Heat shock cognate 71 kDa protein (LAP-1)
HSP7E_HUMAN	Q0VDF9	Heat shock 70 kDa protein 14 (Heat shock protein HSP60)
HSPB1_HUMAN	P04792	Heat shock protein beta-1 (HspB1)
HXK1_HUMAN	P19367	Hexokinase-1 (HK I)
HYAL1_HUMAN	Q12794	Hyaluronidase-1 (Lung carcinoma protein 1)
HYOU1_HUMAN	Q9Y4L1	Hypoxia up-regulated protein 1
I18BP_HUMAN	O95998	Interleukin-18-binding protein (IL-18BP)
IBP2_HUMAN	P18065	Insulin-like growth factor-binding protein 2 (IGFBP-2)
IBP3_HUMAN	P17936	Insulin-like growth factor-binding protein 3 (IGFBP-3)
IBP4_HUMAN	P22692	Insulin-like growth factor-binding protein 4 (IGFBP-4)
IBP5_HUMAN	P24593	Insulin-like growth factor-binding protein 5 (IGFBP-5)
IBP6_HUMAN	P24592	Insulin-like growth factor-binding protein 6 (IGFBP-6)
IBP7_HUMAN	Q16270	Insulin-like growth factor-binding protein 7 (IGFBP-7; TAF)
IC1_HUMAN	P05155	Plasma protease C1 inhibitor (Serpine G1)
ICAM1_HUMAN	P05362	Intercellular adhesion molecule 1 (ICAM-1; CD antigen CD54)
ICAM2_HUMAN	P13598	Intercellular adhesion molecule 2 (ICAM-2; CD antigen CD102)
ICOSL_HUMAN	O75144	ICOS ligand (CD antigen CD275)
IDHC_HUMAN	O75874	Isocitrate dehydrogenase cytoplasmic (IDH)
IGA2_HUMAN	P0DOX2	Immunoglobulin alpha-2 heavy chain
IGD_HUMAN	P0DOX3	Immunoglobulin delta heavy chain
IGE_HUMAN	P0DOX4	Immunoglobulin epsilon heavy chain
IGF1_HUMAN	P05019	Insulin-like growth factor I (IGF-I)
IGF2_HUMAN	P01344	Insulin-like growth factor II (IGF-II)
IGG1_HUMAN	P0DOX5	Immunoglobulin gamma-1 heavy chain
IGHA1_HUMAN	P01876	Immunoglobulin heavy constant alpha 1
IGHA2_HUMAN	P01877	Immunoglobulin heavy constant alpha 2
IGHD_HUMAN	P01880	Immunoglobulin heavy constant delta
IGHG1_HUMAN	P01857	Immunoglobulin heavy constant gamma 1
IGHG2_HUMAN	P01859	Immunoglobulin heavy constant gamma 2
IGHG3_HUMAN	P01860	Immunoglobulin heavy constant gamma 3
IGHG4_HUMAN	P01861	Immunoglobulin heavy constant gamma 4
IGHM_HUMAN	P01871	Immunoglobulin heavy constant mu
IGJ_HUMAN	P01591	Immunoglobulin J chain
IGK_HUMAN	P0DOX7	Immunoglobulin kappa light chain
IGKC_HUMAN	P01834	Immunoglobulin kappa constant
IGL1_HUMAN	P0DOX8	Immunoglobulin lambda-1 light chain
IGLC3_HUMAN	P0DOY3	Immunoglobulin lambda constant 3
IGLC6_HUMAN	P0CF74	Immunoglobulin lambda constant 6
IGLC7_HUMAN	A0M8Q6	Immunoglobulin lambda constant 7
IGLL1_HUMAN	P15814	Immunoglobulin lambda-like polypeptide 1 (CD antigen CD179b)
IGM_HUMAN	P0DOX6	Immunoglobulin mu heavy chain

IHH_HUMAN	Q14623	Indian hedgehog protein (IHH)
IL10_HUMAN	P22301	Interleukin-10 (IL-10)
IL1AP_HUMAN	Q9NPH3	Interleukin-1 receptor accessory protein (IL-1RAcP)
IL6RA_HUMAN	P08887	Interleukin-6 receptor subunit alpha (IL-6R-alpha; CD antigen CD126)
IL6RB_HUMAN	P40189	Interleukin-6 receptor subunit beta (IL-6R-beta; CD antigen CD130)
ILK_HUMAN	Q13418	Integrin-linked protein kinase (ILK-1; ILK-2)
INHBC_HUMAN	P55103	Inhibin beta C chain
IPSP_HUMAN	P05154	Plasma serine protease inhibitor (PAI-3; Serpin A5)
ISLR_HUMAN	O14498	Immunoglobulin superfamily containing leucine-rich repeat protein
ITA2B_HUMAN	P08514	Integrin alpha-IIb (CD antigen CD41)
ITB1_HUMAN	P05556	Integrin beta-1 (CD antigen CD29)
ITB3_HUMAN	P05106	Integrin beta-3 (CD antigen CD61)
ITIH1_HUMAN	P19827	Inter-alpha-trypsin inhibitor heavy chain H1
ITIH2_HUMAN	P19823	Inter-alpha-trypsin inhibitor heavy chain H2
ITIH3_HUMAN	Q06033	Inter-alpha-trypsin inhibitor heavy chain H3
ITIH4_HUMAN	Q14624	Inter-alpha-trypsin inhibitor heavy chain H4
ITIH5_HUMAN	Q86UX2	Inter-alpha-trypsin inhibitor heavy chain H5
ITLN1_HUMAN	Q8WWA0	Intelectin-1 (Omentin)
ITPR1_HUMAN	Q14643	Inositol 1,4,5-trisphosphate receptor type 1 (IP3 receptor isoform 1)
JMJD7_HUMAN	P0C870	JmjC domain-containing protein 7
KAIN_HUMAN	P29622	Kallistatin (Kallikrein inhibitor; Serpin A4)
KCRM_HUMAN	P06732	Creatine kinase M-type (M-CK)
KIT_HUMAN	P10721	Mast/stem cell growth factor receptor Kit (SCFR; CD antigen CD117)
KLK1_HUMAN	P06870	Kallikrein-1 (Tissue kallikrein)
KLK3_human	P07288	Prostate-specific antigen (PSA; Kallikrein-3)
KLK6_HUMAN	Q92876	Kallikrein-6 (Neurosin)
KLKB1_HUMAN	P03952	Plasma kallikrein (Kininogenin; PKK)
KNG1_HUMAN	P01042	Kininogen-1
KPYM_HUMAN	P14618	Pyruvate kinase PKM
KTDAP_HUMAN	P60985	Keratinocyte differentiation-associated protein
KV110_HUMAN	P01602	Immunoglobulin kappa variable 1-5
L1CAM_HUMAN	P32004	Neural cell adhesion molecule L1 (N-CAM-L1; CD antigen CD171)
LAIR1_HUMAN	Q6GTX8	Leukocyte-associated immunoglobulin-like receptor 1 (LAIR-1; CD antigen CD305)
LAMP1_HUMAN	P11279	Lysosome-associated membrane glycoprotein 1 (LAMP-1; CD antigen CD107a)
LAMP2_HUMAN	P13473	Lysosome-associated membrane glycoprotein 2 (LAMP-2; CD antigen CD107b)
LBP_HUMAN	P18428	Lipopolysaccharide-binding protein (LBP)
LCAT_HUMAN	P04180	Phosphatidylcholine-sterol acyltransferase
LDHA_HUMAN	P00338	L-lactate dehydrogenase A chain (LDH-A)

LDHB_HUMAN	P07195	L-lactate dehydrogenase B chain (LDH-B)
LEG3_HUMAN	P17931	Galectin-3 (Gal-3)
LEP_HUMAN	P41159	Leptin (Obesity factor)
LG3BP_HUMAN	Q08380	Galectin-3-binding protein
LGUL_HUMAN	Q04760	Lactoylglutathione lyase
LIMS1_HUMAN	P48059	LIM and senescent cell antigen-like-containing domain protein 1
LIRA3_HUMAN	Q8N6C8	Leukocyte immunoglobulin-like receptor subfamily A member 3 (CD antigen CD85e)
LRMP_HUMAN	Q12912	Lymphoid-restricted membrane protein
LRP1_HUMAN	Q07954	Prolow-density lipoprotein receptor-related protein 1 (LRP-1; CD antigen CD91)
LRP2_HUMAN	P98164	Low-density lipoprotein receptor-related protein 2 (LRP-2)
LSAMP_HUMAN	Q13449	Limbic system-associated membrane protein
LTBP1_HUMAN	Q14766	Latent-transforming growth factor beta-binding protein 1 (LTBP-1; TGF-beta1-BP-1)
LUM_HUMAN	P51884	Lumican
LYAM1_HUMAN	P14151	L-selectin (CD antigen CD62L)
LYSC_HUMAN	P61626	Lysozyme C
LYVE1_HUMAN	Q9Y5Y7	Lymphatic vessel endothelial hyaluronic acid receptor 1 (LYVE-1)
MA1A1_HUMAN	P33908	Mannosyl-oligosaccharide 1,2-alpha-mannosidase IA
MA2A1_HUMAN	Q16706	Alpha-mannosidase 2
MARCO_HUMAN	Q9UEW3	Macrophage receptor MARCO (Scavenger receptor class A member 2)
MASP1_HUMAN	P48740	Mannan-binding lectin serine protease 1
MASP2_HUMAN	O00187	Mannan-binding lectin serine protease 2
MBL2_HUMAN	P11226	Mannose-binding protein C (Mannose-binding lectin)
MEGF8_HUMAN	Q7Z7M0	Multiple epidermal growth factor-like domains protein 8 (EGF-like protein 4)
MGAT1_HUMAN	P26572	Alpha-1,3-mannosyl-glycoprotein 2-beta-N-acetylglucosaminyltransferase
MGMT_HUMAN	P16455	Methylated-DNA--protein-cysteine methyltransferase
MGP_HUMAN	P08493	Matrix Gla protein (MGP)
MIF_HUMAN	P14174	Macrophage migration inhibitory factor (MIF)
MIME_HUMAN	P20774	Mimecan (Osteoglycin)
MINP1_HUMAN	Q9UNW1	Multiple inositol polyphosphate phosphatase 1
MMP2_HUMAN	P08253	72 kDa type IV collagenase (MMP-2)
MMP9_HUMAN	P14780	Matrix metalloproteinase-9 (MMP-9)
MMRN1_HUMAN	Q13201	Multimerin-1 (EMILIN-4)
MMRN2_HUMAN	Q9H8L6	Multimerin-2 (EMILIN-3)
MOES_HUMAN	P26038	Moesin
MPP4_HUMAN	Q96JB8	MAGUK p55 subfamily member 4 (Discs large homolog 6)

MPRI_HUMAN	P11717	Cation-independent mannose-6-phosphate receptor (M6PR; Insulin-like growth factor 2 receptor; CD antigen CD222)
MRC1_HUMAN	P22897	Macrophage mannose receptor 1 (MMR; CD antigen CD206)
MSLN_HUMAN	Q13421	Mesothelin (CAK1 antigen)
MUC16_HUMAN	Q8WXI7	Mucin-16 (MUC-16; Ovarian cancer-related tumor marker CA125)
MUC18_HUMAN	P43121	Cell surface glycoprotein MUC18 (CD antigen CD146)
MYDGF_HUMAN	Q969H8	Myeloid-derived growth factor (MYDGF; IL-25)
MYG_HUMAN	P02144	Myoglobin
MYH9_HUMAN	P35579	Myosin-9 (Myosin heavy chain 9)
MYL6_HUMAN	P60660	Myosin light polypeptide 6 (Myosin light chain 3)
NBL1_HUMAN	P41271	Neuroblastoma suppressor of tumorigenicity 1
NCAM1_HUMAN	P13591	Neural cell adhesion molecule 1 (NCAM-1; CD antigen CD56)
NCAM2_HUMAN	O15394	Neural cell adhesion molecule 2 (NCAM-2)
NCHL1_HUMAN	O00533	Neural cell adhesion molecule L1-like protein
NEBU_HUMAN	P20929	Nebulin
NEST_HUMAN	P48681	Nestin
NEUT_HUMAN	P30990	Neurotensin/neuromedin N
NGAL_HUMAN	P80188	Neutrophil gelatinase-associated lipocalin (Lipocalin-2)
NGF_HUMAN	P01138	Beta-nerve growth factor (Beta-NGF)
NID1_HUMAN	P14543	Nidogen-1 (NID-1) (Entactin)
NMB_HUMAN	P08949	Neuromedin-B
NOE1_HUMAN	Q99784	Noelin (Olfactomedin-1)
NOTC2_HUMAN	Q04721	Neurogenic locus notch homolog protein 2 (Notch 2)
NPY_HUMAN	P01303	Pro-neuropeptide Y
NRP1_HUMAN	O14786	Neuropilin-1 (CD antigen CD304)
OAF_HUMAN	Q86UD1	Out at first protein homolog
OMD_HUMAN	Q99983	Osteomodulin (Osteoadherin)
OSTP_HUMAN	P10451	Osteopontin (Bone sialoprotein 1; SPP-1)
P53_HUMAN	P04637	Cellular tumor antigen p53 (Tumor suppressor p53)
PAFA_HUMAN	Q13093	Platelet-activating factor acetylhydrolase (PAF acetylhydrolase)
PAPP2_HUMAN	Q9BXP8	Pappalysin-2 (Pregnancy-associated plasma protein A2)
PARK7_HUMAN	Q99497	Protein/nucleic acid deglycase DJ-1 (Oncogene DJ1; Parkinson disease protein 7; DJ-1)
PARVB_HUMAN	Q9HBI1	Beta-parvin (Affixin)
PCOC1_HUMAN	Q15113	Procollagen C-endopeptidase enhancer 1
PCP_HUMAN	P42785	Lysosomal Pro-X carboxypeptidase
PCSK1_HUMAN	Q9UHG2	ProSAAS (Proprotein convertase 1 inhibitor)
PCSK9_HUMAN	Q8NBP7	Proprotein convertase subtilisin/kexin type 9 (Proprotein convertase 9)
PCYOX_HUMAN	Q9UHG3	Prenylcysteine oxidase 1 (Prenylcysteine lyase)
PDIA1_HUMAN	P07237	Protein disulfide-isomerase (PDI)
PDIA3_HUMAN	P30101	Protein disulfide-isomerase A3

PDLI1_HUMAN	O00151	PDZ and LIM domain protein 1 (Elfin)
PEBP4_HUMAN	Q96S96	Phosphatidylethanolamine-binding protein 4 (PEBP-4)
PECA1_HUMAN	P16284	Platelet endothelial cell adhesion molecule (PECAM-1; CD antigen CD31)
PEDF_HUMAN	P36955	Pigment epithelium-derived factor (PEDF; Serpin F1)
PEPD_HUMAN	P12955	Xaa-Pro dipeptidase (Peptidase D)
PERM_HUMAN	P05164	Myeloperoxidase (MPO)
PGAM1_HUMAN	P18669	Phosphoglycerate mutase 1
PGBM_HUMAN	P98160	Basement membrane-specific heparan sulfate proteoglycan core protein (Perlecan)
PGK1_HUMAN	P00558	Phosphoglycerate kinase 1
PGRP2_HUMAN	Q96PD5	N-acetylmuramoyl-L-alanine amidase
PGS2_HUMAN	P07585	Decorin (Bone proteoglycan II)
PHB_HUMAN	P35232	Prohibitin
PHLD_HUMAN	P80108	Phosphatidylinositol-glycan-specific phospholipase D
PI16_HUMAN	Q6UXB8	Peptidase inhibitor 16 (Cysteine-rich secretory protein 9)
PIGR_HUMAN	P01833	Polymeric immunoglobulin receptor
PLEK_HUMAN	P08567	Pleckstrin
PLF4_HUMAN	P02776	Platelet factor 4 (PF-4; C-X-C motif chemokine 4; Oncostatin-A)
PLMN_HUMAN	P00747	Plasminogen
PLPL8_HUMAN	Q9NP80	Calcium-independent phospholipase A2-gamma
PLSL_HUMAN	P13796	Plastin-2 (L-plastin)
PLTP_HUMAN	P55058	Phospholipid transfer protein (Lipid transfer protein II)
PLXB1_HUMAN	O43157	Plexin-B1 (Semaphorin receptor SEP)
PLXB2_HUMAN	O15031	Plexin-B2
PMGE_HUMAN	P07738	Bisphosphoglycerate mutase
PNPH_HUMAN	P00491	Purine nucleoside phosphorylase
PON1_HUMAN	P27169	Serum paraoxonase/arylesterase 1 (PON 1)
PON3_HUMAN	Q15166	Serum paraoxonase/lactonase 3
POSTN_HUMAN	Q15063	Periostin (PN; OSF-2)
PRDX1_HUMAN	Q06830	Peroxiredoxin-1 (NKEF-A)
PRDX2_HUMAN	P32119	Peroxiredoxin-2 (NKEF-B)
PRDX6_HUMAN	P30041	Peroxiredoxin-6
PRG2_HUMAN	P13727	Bone marrow proteoglycan
PRG4_HUMAN	Q92954	Proteoglycan 4 (Lubricin)
PRIO_HUMAN	P04156	Major prion protein (PrP; CD antigen CD230)
PROC_HUMAN	P04070	Vitamin K-dependent protein C (Blood coagulation factor XIV)
PROF1_HUMAN	P07737	Profilin-1
PROP_HUMAN	P27918	Properdin (Complement factor P)
PROS_HUMAN	P07225	Vitamin K-dependent protein S
PROZ_HUMAN	P22891	Vitamin K-dependent protein Z
PSCA_HUMAN	O43653	Prostate stem cell antigen
PSPB_HUMAN	P07988	Pulmonary surfactant-associated protein B

PTEN_HUMAN	P60484	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN
PTGDS_HUMAN	P41222	Prostaglandin-H2 D-isomerase (PGDS2)
PTN_HUMAN	P21246	Pleiotrophin (OSF-1)
PTPRC_HUMAN	P08575	Receptor-type tyrosine-protein phosphatase C (CD antigen CD45)
PTPRG_HUMAN	P23470	Receptor-type tyrosine-protein phosphatase gamma
PTPRJ_HUMAN	Q12913	Receptor-type tyrosine-protein phosphatase eta (CD antigen CD148)
PTPRS_HUMAN	Q13332	Receptor-type tyrosine-protein phosphatase S
PVR_HUMAN	P15151	Poliovirus receptor (CD antigen CD155)
PXDC2_HUMAN	Q6UX71	Plexin domain-containing protein 2
PZP_HUMAN	P20742	Pregnancy zone protein
QSOX1_HUMAN	O00391	Sulfhydryl oxidase 1 (Quiescin Q6)
RARR2_HUMAN	Q99969	Retinoic acid receptor responder protein 2 (Chemerin)
RED1_HUMAN	P78563	Double-stranded RNA-specific editase 1
RELN_HUMAN	P78509	Reelin
RET4_HUMAN	P02753	Retinol-binding protein 4
RETN_HUMAN	Q9HD89	Resistin (Adipose tissue-specific secretory factor)
RNAS1_HUMAN	P07998	Ribonuclease pancreatic
ROBO4_HUMAN	Q8WZ75	Roundabout homolog 4
RSRC2_HUMAN	Q7L4I2	Arginine/serine-rich coiled-coil protein 2
RTN4_HUMAN	Q9NQC3	Reticulon-4 (Nogo protein)
S100P_HUMAN	P25815	Protein S100-P (S100 calcium-binding protein P)
S10A7_HUMAN	P31151	Protein S100-A7 (Psoriasis)
S10A8_HUMAN	P05109	Protein S100-A8 (Calgranulin-A; Calprotectin L1L subunit)
S10A9_HUMAN	P06702	Protein S100-A9 (Calgranulin-B) ; Calprotectin L1H subunit)
S10AB_HUMAN	P31949	Protein S100-A11 (Calgizzarin)
S10AC_HUMAN	P80511	Protein S100-A12(Calgranulin-C)
SAA1_HUMAN	P0DJ18	Serum amyloid A-1 protein (SAA)
SAA2_HUMAN	P0DJ19	Serum amyloid A-2 protein (SAA2)
SAA4_HUMAN	P35542	Serum amyloid A-4 protein (C-SAA)
SAMP_HUMAN	P02743	Serum amyloid P-component (SAP) (
SAP_HUMAN	P07602	Prosaposin
SBP1_HUMAN	Q13228	Methanethiol oxidase (Selenium-binding protein 1)
SCG1_HUMAN	P05060	Secretogranin-1 (Chromogranin-B)
SCG2_HUMAN	P13521	Secretogranin-2 (Chromogranin-C)
SCG3_HUMAN	Q8WXD2	Secretogranin-3
SDF1_HUMAN	P48061	Stromal cell-derived factor 1 (SDF-1; C-X-C motif chemokine 12)
SDPR_HUMAN	O95810	Caveolae-associated protein 2 (Cavin-2)
SE6L1_HUMAN	Q9BYH1	Seizure 6-like protein
SE6L2_HUMAN	Q6UXD5	Seizure 6-like protein 2
SEM7A_HUMAN	O75326	Semaphorin-7A (CD antigen CD108)
SEPP1_HUMAN	P49908	Selenoprotein P (SeP)

SEPR_HUMAN	Q12884	Prolyl endopeptidase FAP (Fibroblast activation protein alpha; Seprase)
SG3A1_HUMAN	Q96QR1	Secretoglobin family 3A member 1
SH3L3_HUMAN	Q9H299	SH3 domain-binding glutamic acid-rich-like protein 3 (SH3BP-1)
SHBG_HUMAN	P04278	Sex hormone-binding globulin (SHBG)
SHH_HUMAN	Q15465	Sonic hedgehog protein (SHH)
SODC_HUMAN	P00441	Superoxide dismutase (hSod1)
SODE_HUMAN	P08294	Extracellular superoxide dismutase
SPA11_HUMAN	Q86U17	Serpin A11
SPP24_HUMAN	Q13103	Secreted phosphoprotein 24 (Spp-24)
SPRC_HUMAN	P09486	SPARC (Osteonectin; BM-40)
SPRL1_HUMAN	Q14515	SPARC-like protein 1
SPTA1_HUMAN	P02549	Spectrin alpha chain, erythrocytic 1
SRC8_HUMAN	Q14247	Src substrate cortactin (Amplixin; Oncogene EMS1)
SRGN_HUMAN	P10124	Serglycin
STOM_HUMAN	P27105	Erythrocyte band 7 integral membrane protein (Stomatin)
STXB5_HUMAN	Q5T5C0	Syntaxin-binding protein 5 (Tomosyn-1)
SYPL1_HUMAN	Q16563	Synaptophysin-like protein 1 (Pantophysin)
SYUA_HUMAN	P37840	Alpha-synuclein
TARSH_HUMAN	Q7Z7G0	Target of Nesh-SH3
TBB1_HUMAN	Q9H4B7	Tubulin beta-1 chain
TBB5_HUMAN	P07437	Tubulin beta chain (Tubulin beta-5 chain)
TCO2_HUMAN	P20062	Transcobalamin-2
TENA_HUMAN	P24821	Tenascin (Tenascin-C; TN-C)
TENX_HUMAN	P22105	Tenascin-X (TN-X)
TERA_HUMAN	P55072	Transitional endoplasmic reticulum ATPase
TETN_HUMAN	P05452	Tetranectin (TN)
TFR1_HUMAN	P02786	Transferrin receptor protein 1 (TfR1; CD antigen CD71)
TGFR3_HUMAN	Q03167	Transforming growth factor beta receptor type 3 (TGFR-3)
TGON2_HUMAN	O43493	Trans-Golgi network integral membrane protein 2
THBG_HUMAN	P05543	Thyroxine-binding globulin (Serpin A7; T4-binding globulin)
THIO_HUMAN	P10599	Thioredoxin (Trx)
THRB_HUMAN	P00734	Prothrombin (Coagulation factor II)
TICN1_HUMAN	Q08629	Testican-1
TIE1_HUMAN	P35590	Tyrosine-protein kinase receptor Tie-1
TIMP1_HUMAN	P01033	Metalloproteinase inhibitor 1 (TIMP-1)
TIP_HUMAN	Q8TB96	T-cell immunomodulatory protein
TKN1_HUMAN	P20366	Protachykinin-1 (PPT)
TKT_HUMAN	P29401	Transketolase (TK)
TLN1_HUMAN	Q9Y490	Talin-1
TNNI3_HUMAN	P19429	Troponin I, cardiac muscle (Cardiac troponin I)
TNNT2_HUMAN	P45379	Troponin T, cardiac muscle (Cardiac muscle troponin T)
TPIS_HUMAN	P60174	Triosephosphate isomerase

TPM3_HUMAN	P06753	Tropomyosin alpha-3 chain (Gamma-tropomyosin)
TPM4_HUMAN	P67936	Tropomyosin alpha-4 chain (Tropomyosin-4)
TR11B_HUMAN	O00300	Tumor necrosis factor receptor superfamily member 11B (Osteoprotegerin)
TRFE_HUMAN	P02787	Serotransferrin (Transferrin)
TRFL_HUMAN	P02788	Lactotransferrin (Lactoferrin)
TRY3_HUMAN	P35030	Trypsin-3
TSP1_HUMAN	P07996	Thrombospondin-1
TSP4_HUMAN	P35443	Thrombospondin-4
TT39A_HUMAN	Q5SRH9	Tetratricopeptide repeat protein 39A
TTHY_HUMAN	P02766	Transthyretin (Prealbumin)
TWSG1_HUMAN	Q9GZX9	Twisted gastrulation protein homolog 1
TYB4_HUMAN	P62328	Thymosin beta-4
URP2_HUMAN	Q86UX7	Fermitin family homolog 3 (Kindlin-3)
VASN_HUMAN	Q6EMK4	Vasorin (Protein slit-like 2)
VASP_HUMAN	P50552	Vasodilator-stimulated phosphoprotein (VASP)
VCAM1_HUMAN	P19320	Vascular cell adhesion protein 1 (VCAM-1; CD antigen CD106)
VEGFA_HUMAN	P15692	Vascular endothelial growth factor A (VEGF-A)
VGFB_HUMAN	O15240	Neurosecretory protein VGF
VEGFR3_HUMAN	P35916	Vascular endothelial growth factor receptor 3 (VEGFR-3; FLT-4)
VIME_HUMAN	P08670	Vimentin
VINC_HUMAN	P18206	Vinculin
VNN1_HUMAN	O95497	Pantetheinase (Vanin-1)
VTCN1_HUMAN	Q7Z7D3	V-set domain-containing T-cell activation inhibitor 1
VTDB_HUMAN	P02774	Vitamin D-binding protein
VTNC_HUMAN	P04004	Vitronectin
VWF_HUMAN	P04275	von Willebrand factor (vWF)
WDR1_HUMAN	O75083	WD repeat-containing protein 1
WFDC2_HUMAN	Q14508	WAP four-disulfide core domain protein 2
ZA2G_HUMAN	P25311	Zinc-alpha-2-glycoprotein
ZPI_HUMAN	Q9UK55	Protein Z-dependent protease inhibitor (Serpin A10)
ZYX_HUMAN	Q15942	Zyxin (Zyxin-2)

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