

Appendix C Table 5.3 List of pathways that identified proteins are involved.

Pathway ^a	Protein Quantities ^b	Acc. No. ^c
Metabolism	139	P54071;P21614;G3UXL2;Q8BMS4;Q78JT3;P42125;Q8BMS1;P30115;S4R1W1;D6RHA7;Q91XD4;Q8QZT1;Q8BGT5;Q9D0F9;Q8K2B3;P32020;O09173;O35490;Q91Y97;Q3UEG6;G5E8R3;Q4LDG0;E9PW69;Q91X34;Q9Z2V4;Q8VCH0;Q9DBL1;D3Z3P8;Q9QXX4;P07724;P52196;P46664;J3QNG0;P19096;Q8CIM7;Q9CR00;Q9DCM0;Q8CHR6;P10649;Q9DB77;Q8QZR5;Q91X83;Q9WUM5;A2AQT8;P00688;P08249;D3YWR7;Q9JK53;Q00519;Q9JLJ2;Q6PB66;K9J7B2;Q9DBJ1;Q60759;Q80XN0;P62983;Q8VCN5;Q99KI0;P36552;Q9EQ20;P15105;B1B0C7;P00329;O35308;Q9JKY7;P26443;Q91Z53;Q64459;P56391;Q9DCJ5;P56593;P24549;Q9DCW4;O70250;D3YUG4;Q8K3J1;D3Z3C3;P50247;Q64442;Q6PF96;P22315;P17751;D3Z2P8;D3Z0E6;Q9JHI5;B1ASE2;P11714;G3X9Y6;P99028;Q8CG76;P51660;E9Q484;Q8BMF4;Q9CPP6;A8DUK4;P52480;Q91X44;Q8VC12;Q9CZ13;P48758;Q9QZD8;P14152;Q3UEJ6;Q9QXD1;Q99LC3;P38060;O88844;Q8C196;Q571F8;P16015;Q99LC5;P11352;Q922D8;P20060;P24270;Q5NC80;P05202;Q61176;Q9CR61;Q8CHT0;Q63886;Q99K67;Q8JZR0;Q93092;Q6XVG2;Q9QXD6;Q91XE4;P33267;P40142;Q9CQA3;P51881;P16331;P97742;P47738
Metabolism of amino acids and derivatives	34	Q9DCM0;Q9EQ20;P15105;Q78JT3;Q8QZR5;Q8VC12;Q91X83;P26443;Q91Z53;Q9QZD8;Q91XD4;Q8BGT5;Q8QZT1;D3YWR7;Q8C196;Q571F8;O09173;O35490;Q3UEG6;P50247;Q9JLJ2;E9PW69;P05202;Q61176;Q8CHT0;Q9DBL1;Q9JHI5;Q99K67;Q60759;P52196;P16331;Q8VCN5;J3QNG0;Q9CR00
Signal Transduction	34	O35718;P00329;B1B0C7;Q01853;P68373;O88451;P24549;P43117;Q7TRG2;P68368;P01027;Q9QYE5;Q9EQ31;E9PW69;P20918;Q61483;D6RFQ4;P27467;D3Z3P8;O54689;D3Z2B2;P15409;G3X9Y6;P62983;Q8K0E8;P17427;Q99LB2;P99024;Q99PT1;E9Q5F4;Q8BMF4;P97742;Q9CR00
Metabolism of carbohydrates	31	P52480;G3UXL2;B1B0C7;Q91X44;S4R1W1;Q9QZD8;P14152;Q3UEJ6;P00688;P08249;Q9D0F9;O70250;Q91Y97;D3Z3C3;Q9JK53;P20060;G5E8R3;P05202;Q64442;Q9Z2V4;P17751;Q9DBJ1;Q9QXX4;Q93092;Q9QXD6;P62983;P40142
Metabolism of proteins	27	P58252;D3YYM6;Q9CPT3;P68373;P51612;P80313;P14206;P62281;P35979;P80316;P14211;P68368;P28843;Q9D8E6;Q9D8N0;P20918;P33587;Q9WVA2;P97351;Q9QXX4;Q9CRC0;P62983;P62889;P99024;E9Q5F4;P27046

Metabolism of lipids and lipoproteins	25	P21614;Q8BMS4;B1B0C7;Q91X34;P42125;Q8BMS1;Q8VCH0;D3Z3P8;P48758;Q8JZR0;Q9QXD1;G3X9Y6;P38060;Q6XVG2;O88844;Q8QZT1;Q80XN0;P32020;P07724;P51660;P11352;P19096;P97742;P20060;Q4LDG0
Immune System	24	P01872;O35718;E9PW69;P97313;P68373;Q792Z1;Q8CGE8;Q08857;O54689;Q8VCF0;A2A6Q5;P35762;Q9WUL6;P10605;P62983;P14211;P99024;P17427;E9Q5F4;P68368;P01027;P29788;P07146;Q9CR00
The citric acid (TCA) cycle and respiratory electron transport	22	Q9CPP6;Q99KI0;P54071;Q6PB66;Q6PF96;Q9DB77;Q9CR61;O35308;Q9CZ13;Q9WUM5;P56391;Q9DCJ5;B1ASE2;Q99LC3;P08249;P99028;Q9DCW4;Q8K2B3;Q99LC5;Q9CQA3;Q8K3J1;Q8BMF4
Biological oxidations	22	P10649;P00329;D3Z2P8;K9J7B2;Q9JKY7;Q91X83;P30115;Q64459;D3Z0E6;Q63886;D6RHA7;P11714;P56593;Q6XVG2;P24549;P33267;Q91XE4;Q8CG76;E9Q484;Q8CIM7;P47738;P50247
Glucose metabolism	19	P52480;P05202;P17751;Q9Z2V4;Q9DBJ1;S4R1W1;Q9QZD8;Q9QXX4;P14152;Q3UEJ6;Q9QXD6;P08249;P62983;Q9D0F9;O70250;Q91Y97;G5E8R3
Hemostasis	19	A8DUK4;Q9WTP7;P20918;P33587;O35308;P68373;Q3V3R4;P08228;P17742;Q08857;D3Z2B2;Q8K0E8;P07724;P99024;Q921I1;E9Q5F4;P68368;P14094
Gene Expression	19	P58252;E9PW69;D3YYM6;Q6PB66;D3YTN9;P35700;P97351;P56391;P14206;P60335;P62281;P35979;P62983;Q571F8;P62889;Q9CR00;Q9D8N0;Q9D8E6;P62320
Respiratory electron transport, ATP synthesis by chemiosmotic coupling, and heat production by uncoupling proteins.	16	Q9CPP6;Q6PB66;Q6PF96;Q9DB77;Q9CR61;Q9CZ13;P56391;B1ASE2;Q9DCJ5;Q99LC3;P99028;Q9DCW4;Q8K2B3;Q9CQA3;Q99LC5;Q8K3J1
Gluconeogenesis	15	P05202;P17751;Q9Z2V4;Q9DBJ1;S4R1W1;Q9QZD8;P14152;Q9QXX4;Q9QXD6;P08249;O70250;Q91Y97;G5E8R3
Respiratory electron transport	15	Q9CPP6;Q6PB66;Q6PF96;Q9DB77;Q9CR61;Q9CZ13;P56391;Q9DCJ5;Q99LC3;P99028;Q9DCW4;Q8K2B3;Q9CQA3;Q99LC5;Q8K3J1
Vesicle-mediated transport	15	A8DUK4;Q07113;H3BIX5;Q91X72;Q9QZE5;P68373;Q08857;P14211;P62983;P07724;P99024;E9Q5F4;P68368;Q07456
Innate Immune System	15	Q9WUL6;E9PW69;P97313;P10605;P62983;E9Q5F4;Q792Z1;P01027;P29788;Q8CGE8;Q08857;P07146;Q9CR00;O54689;Q8VCF0
Adaptive Immune System	15	P01872;O35718;E9PW69;P68373;Q08857;A2A6Q5;Q9WUL6;P35762;P62983;P14211;P99024;P17427;P68368;P01027;Q9CR00
Extracellular matrix organization	13	E9PY32;P20918;B1B0C7;F8VQ40;Q792Z1;Q61292;Q3V3R4;P10605;Q8K0E8;O35701;P29788;Q9R229;P07146

Phase 1 - Functionalization of compounds	11	P56593;Q6XVG2;P24549;P33267;P00329;Q9JKY7;Q64459;Q8CIM7;P47738;D6RHA7;P11714
Cell Cycle, Mitotic	11	A2A6Q5;E9PW69;P48964;P62983;P99024;P68368;P68373;A2AUM9;Q921G8;Q9CR00
Cell Cycle	11	A2A6Q5;E9PW69;P48964;P62983;P99024;P68368;P68373;A2AUM9;Q921G8;Q9CR00
Eukaryotic Translation Elongation	10	P58252;P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;Q9D8N0;P14206
Translation	10	P58252;P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;Q9D8N0;P14206
Transmembrane transport of small molecules	10	P62983;G5E8G6;P07724;Q91X44;Q921I1;O35308;P14094;Q9QZD8;Q8VDN2;Q61672
Signaling by Retinoic Acid	9	G3X9Y6;P24549;D6RFQ4;P00329;Q99LB2;D3Z3P8;Q8BMF4;P97742;O88451
Phase II conjugation	9	P10649;D3Z2P8;E9Q484;K9J7B2;P30115;Q91X83;D3Z0E6;Q63886;P50247
Peptide chain elongation	9	P58252;P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Cellular responses to stress	9	A2A6Q5;P62983;D3Z4F9;Q01853;P11352;P08228;P35700;P24270;D3Z0Y2
Signaling by GPCR	9	P15409;P43117;Q7TRG2;P01027;P27467;Q9EQ31;O54689;D3Z2B2
Bile acid and bile salt metabolism	8	G3X9Y6;P32020;P07724;Q91X34;P51660;D3Z3P8;Q4LDG0;Q9QXD1
Pyruvate metabolism and Citric Acid (TCA) cycle	8	Q99KI0;P54071;P08249;Q8K2B3;Q9CQA3;O35308;Q8BMF4;Q9WUM5
Glycolysis	8	P52480;O70250;P17751;Q91Y97;Q9DBJ1;S4R1W1
Platelet degranulation	8	P20918;P07724;Q8K0E8;Q921I1;P68368;P08228;Q08857;D3Z2B2
Response to elevated platelet cytosolic Ca ²⁺	8	P20918;P07724;Q8K0E8;Q921I1;P68368;P08228;Q08857;D3Z2B2
Eukaryotic Translation Termination	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Fatty acid, triacylglycerol, and ketone body metabolism	8	P38060;Q80XN0;Q8QZT1;P42125;Q8BMS1;P19096;P97742;Q8JZR0
Nonsense Mediated Decay (NMD) independent of the Exon Junction Complex (EJC)	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Formation of a pool of free 40S subunits	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206

G2/M Transition	8	P48964;P62983;P99024;P68368;P68373;A2AUM9;Q921G8
Mitotic G2-G2/M phases	8	P48964;P62983;P99024;P68368;P68373;A2AUM9;Q921G8
L13a-mediated translational silencing of Ceruloplasmin expression	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
GTP hydrolysis and joining of the 60S ribosomal subunit	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Nonsense-Mediated Decay (NMD)	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Nonsense Mediated Decay (NMD) enhanced by the Exon Junction Complex (EJC)	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
SRP-dependent cotranslational protein targeting to membrane	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Eukaryotic Translation Initiation	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Cap-dependent Translation Initiation	8	P35979;D3YYM6;P62281;P62983;P62889;P97351;Q9D8E6;P14206
Membrane Trafficking	8	P62983;H3BIX5;Q07113;Q9QZE5;P99024;P68368;E9Q5F4;P68373
Platelet activation, signaling and aggregation	8	P20918;P07724;Q8K0E8;Q921I1;P68368;P08228;Q08857;D3Z2B2
Post-translational protein modification	8	P58252;Q9CRC0;P14211;P33587;Q9CPT3;P51612;P27046
GPCR downstream signaling	8	P15409;P43117;Q7TRG2;P01027;Q9EQ31;O54689;D3Z2B2
Sulfur amino acid metabolism	7	Q9DCM0;P52196;O35490;Q8VCN5;Q91X83;Q9QZD8;P50247
Synthesis of bile acids and bile salts via 7alpha-hydroxycholesterol	7	G3X9Y6;P32020;Q91X34;P51660;D3Z3P8;Q4LDG0;Q9QXD1
Synthesis of bile acids and bile salts	7	G3X9Y6;P32020;Q91X34;P51660;D3Z3P8;Q4LDG0;Q9QXD1
RA biosynthesis pathway	7	G3X9Y6;P24549;D6RFQ4;P00329;Q99LB2;D3Z3P8;O88451
Xenobiotics	7	P56593;Q6XVG2;P33267;Q9JKY7;Q64459;Q8CIM7;P11714
Binding and Uptake of Ligands by Scavenger Receptors	7	A8DUK4;P14211;P07724;Q91X72;Q08857;Q07456
Metabolism of nucleotides	7	Q5NC80;Q8CHR6;P46664;P11352;Q3UEG6;P24270;Q00519

Cytochrome P450 - arranged by substrate type	7	P56593;Q6XVG2;P33267;Q9JKY7;Q64459;Q8CIM7;P11714
L1CAM interactions	7	P99024;O08553;P17427;E9Q5F4;P68368;P68373;Q3V3R4
Factors involved in megakaryocyte development and platelet production	7	A8DUK4;Q9WTP7;P99024;E9Q5F4;P68368;P68373
Signaling by Hedgehog	7	E9PW69;P62983;Q01853;P99024;P68368;P68373;Q9CR00
Assembly of the primary cilium	7	P15409;H3BIX5;P99024;P68368;P68373;A2AUM9
Separation of Sister Chromatids	7	A2A6Q5;E9PW69;P62983;P99024;P68368;P68373;Q9CR00
Mitotic Anaphase	7	A2A6Q5;E9PW69;P62983;P99024;P68368;P68373;Q9CR00
Mitotic Metaphase and Anaphase	7	A2A6Q5;E9PW69;P62983;P99024;P68368;P68373;Q9CR00
M Phase	7	A2A6Q5;E9PW69;P62983;P99024;P68368;P68373;Q9CR00
Organelle biogenesis and maintenance	7	P15409;H3BIX5;P99024;P68368;P68373;A2AUM9
Class I MHC mediated antigen processing & presentation	7	A2A6Q5;O35718;E9PW69;P14211;P62983;Q08857;Q9CR00
Axon guidance	7	P99024;O08553;P17427;E9Q5F4;P68368;P68373;Q3V3R4
GPCR ligand binding	7	P15409;P43117;P01027;P27467;Q9EQ31;O54689;D3Z2B2
Developmental Biology	7	P99024;O08553;P17427;E9Q5F4;P68368;P68373;Q3V3R4
Amino acid synthesis and interconversion (transamination)	6	Q8BGT5;P05202;Q571F8;P15105;Q8QZR5;P26443
Citric acid cycle (TCA cycle)	6	Q99KI0;P54071;P08249;Q8K2B3;Q9CQA3;Q9WUM5
Prefoldin mediated transfer of substrate to CCT/TriC	6	P80316;P99024;E9Q5F4;P68368;P68373;P80313
Cooperation of Prefoldin and TriC/CCT in actin and tubulin folding	6	P80316;P99024;E9Q5F4;P68368;P68373;P80313
Recycling pathway of L1	6	P99024;O08553;P17427;E9Q5F4;P68368;P68373
Chaperonin-mediated protein folding	6	P80316;P99024;E9Q5F4;P68368;P68373;P80313
Protein folding	6	P80316;P99024;E9Q5F4;P68368;P68373;P80313
Centrosome maturation	6	P99024;P68368;P68373;A2AUM9;Q921G8

Recruitment of mitotic centrosome proteins and complexes	6	P99024;P68368;P68373;A2AUM9;Q921G8
Hedgehog 'off' state	6	E9PW69;P62983;P99024;P68368;P68373;Q9CR00
Hedgehog 'on' state	6	E9PW69;P62983;P99024;P68368;P68373;Q9CR00
Degradation of the extracellular matrix	6	E9PY32;P20918;P10605;B1B0C7;Q792Z1;P07146
Class A/1 (Rhodopsin-like receptors)	6	P15409;P43117;P01027;Q9EQ31;O54689;D3Z2B2
Formation of tubulin folding intermediates by CCT/TriC	5	P80316;P99024;P68368;P68373;P80313
Peroxisomal lipid metabolism	5	O88844;P32020;P51660;Q8VCH0;Q9QXD1
Detoxification of Reactive Oxygen Species	5	P11352;P08228;P35700;D3Z0Y2;P24270
Scavenging of heme from plasma	5	A8DUK4;P07724;Q91X72;Q07456
Formation of the ternary complex, and subsequently, the 43S complex	5	P62281;D3YYM6;P62983;P97351;P14206
Translation initiation complex formation	5	P62281;D3YYM6;P62983;P97351;P14206
Ribosomal scanning and start codon recognition	5	P62281;D3YYM6;P62983;P97351;P14206
Activation of the mRNA upon binding of the cap-binding complex and eIFs, and subsequent binding to 43S	5	P62281;D3YYM6;P62983;P97351;P14206
Arachidonic acid metabolism	5	G3X9Y6;Q6XVG2;P11352;D3Z3P8;P48758
Regulation of PLK1 Activity at G2/M Transition	5	P62983;P99024;P68368;A2AUM9
Cell Cycle Checkpoints	5	A2A6Q5;E9PW69;P48964;P62983;Q9CR00
Antigen processing-Cross presentation	5	E9PW69;P62983;P14211;Q08857;Q9CR00
DNA Repair	5	P97313;Q9DCD2;P62983;Q01853;P51612

Antigen processing: Ubiquitination & Proteasome degradation	5	A2A6Q5;O35718;E9PW69;P62983;Q9CR00
G alpha (i) signalling events	5	P15409;P01027;Q9EQ31;O54689;D3Z2B2
Signaling by Wnt	5	E9PW69;P62983;P17427;P27467;Q9CR00
Generic Transcription Pathway	5	Q6PB66;P62983;Q571F8;P35700;P56391
Neuronal System	5	Q571F8;P15105;P17427;P47738;Q8VD73
SLC-mediated transmembrane transport	5	P07724;Q91X44;O35308;Q9QZD8;Q61672
Signaling by Rho GTPases	5	P99024;E9Q5F4;P68368;Q99PT1;P68373
Degradation of cysteine and homocysteine	4	Q9DCM0;P52196;Q8VCN5;Q9QZD8
Ethanol oxidation	4	P24549;P00329;P47738;D6RHA7
Branched-chain amino acid catabolism	4	Q9EQ20;Q8QZT1;Q9DBL1;Q9JHI5
Aflatoxin activation and detoxification	4	P56593;Q91XE4;Q8CG76;Q64459
RHO GTPases activate IQGAPs	4	P99024;E9Q5F4;P68368;P68373
Recruitment of NuMA to mitotic centrosomes	4	P99024;P68368;P68373;Q921G8
Gamma carboxylation, hypusine formation and arylsulfatase activation	4	P58252;Q9CRC0;P33587
Gap junction trafficking	4	P99024;E9Q5F4;P68368;P68373
Purine metabolism	4	P46664;P11352;P24270;Q00519
Gap junction trafficking and regulation	4	P99024;E9Q5F4;P68368;P68373
Laminin interactions	4	F8VQ40;B1B0C7;Q3V3R4;Q61292
Activation of Matrix Metalloproteinases	4	E9PY32;P20918;Q792Z1;P07146
p53-Independent G1/S DNA damage checkpoint	4	E9PW69;P48964;P62983;Q9CR00

p53-Independent DNA Damage Response	4	E9PW69;P48964;P62983;Q9CR00
Ubiquitin Mediated Degradation of Phosphorylated Cdc25A	4	E9PW69;P48964;P62983;Q9CR00
Autodegradation of Cdh1 by Cdh1:APC/C	4	A2A6Q5;E9PW69;P62983;Q9CR00
Dectin-1 mediated noncanonical NF-kB signaling	4	Q9WUL6;E9PW69;P62983;Q9CR00
G1/S DNA Damage Checkpoints	4	E9PW69;P48964;P62983;Q9CR00
Hedgehog ligand biogenesis	4	E9PW69;P62983;Q01853;Q9CR00
APC/C:Cdc20 mediated degradation of Securin	4	A2A6Q5;E9PW69;P62983;Q9CR00
Loss of proteins required for interphase microtubule organization from the centrosome	4	P99024;P68368;A2AUM9
Loss of Nlp from mitotic centrosomes	4	P99024;P68368;A2AUM9
Cyclin A:Cdk2-associated events at S phase entry	4	E9PW69;P48964;P62983;Q9CR00
Non-integrin membrane-ECM interactions	4	F8VQ40;B1B0C7;Q61292;P29788
Cyclin E associated events during G1/S transition	4	E9PW69;P48964;P62983;Q9CR00
APC/C:Cdh1 mediated degradation of Cdc20 and other APC/C:Cdh1 targeted proteins in late mitosis/early G1	4	A2A6Q5;E9PW69;P62983;Q9CR00
Cdc20:Phospho-APC/C mediated degradation of Cyclin A	4	A2A6Q5;E9PW69;P62983;Q9CR00

APC:Cdc20 mediated degradation of cell cycle proteins prior to satisfaction of the cell cycle checkpoint	4	A2A6Q5;E9PW69;P62983;Q9CR00
APC/C:Cdc20 mediated degradation of mitotic proteins	4	A2A6Q5;E9PW69;P62983;Q9CR00
Activation of APC/C and APC/C:Cdc20 mediated degradation of mitotic proteins	4	A2A6Q5;E9PW69;P62983;Q9CR00
Regulation of APC/C activators between G1/S and early anaphase	4	A2A6Q5;E9PW69;P62983;Q9CR00
Metabolism of vitamins and cofactors	4	P19096;Q922D8;G5E8R3;A2AQT8
Metabolism of water-soluble vitamins and cofactors	4	P19096;Q922D8;G5E8R3;A2AQT8
APC/C-mediated degradation of cell cycle proteins	4	A2A6Q5;E9PW69;P62983;Q9CR00
Regulation of mitotic cell cycle	4	A2A6Q5;E9PW69;P62983;Q9CR00
ECM proteoglycans	4	F8VQ40;Q61292;O35701;P29788
PCP/CE pathway	4	E9PW69;P62983;P17427;Q9CR00
Transcriptional Regulation by TP53	4	Q6PB66;Q571F8;P35700;P56391
TP53 Regulates Metabolic Genes	4	Q6PB66;Q571F8;P35700;P56391
Anchoring of the basal body to the plasma membrane	4	P99024;P68368;A2AUM9
Regulation of mRNA stability by proteins that bind AU-rich elements	4	E9PW69;P62983;D3YTN9;Q9CR00
Visual phototransduction	4	G3X9Y6;P15409;B1B0C7;D3Z3P8
CLEC7A (Dectin-1) signaling	4	Q9WUL6;E9PW69;P62983;Q9CR00
G1/S Transition	4	E9PW69;P48964;P62983;Q9CR00

Cell surface interactions at the vascular wall	4	P33587;O35308;P14094;P17742
Integration of energy metabolism	4	Q93092;P40142;P51881;P19096
Integrin cell surface interactions	4	B1B0C7;Q8K0E8;Q3V3R4;P29788
beta-catenin independent WNT signaling	4	E9PW69;P62983;P17427;Q9CR00
MHC class II antigen presentation	4	P99024;P17427;P68368;P68373
Glycosaminoglycan metabolism	4	B1B0C7;D3Z3C3;Q9JK53;P20060
ER-Phagosome pathway	4	E9PW69;P62983;P14211;Q9CR00
RHO GTPases Activate Formins	4	P99024;E9Q5F4;P68368;P68373
C-type lectin receptors (CLRs)	4	Q9WUL6;E9PW69;P62983;Q9CR00
Mitotic G1-G1/S phases	4	E9PW69;P48964;P62983;Q9CR00
S Phase	4	E9PW69;P48964;P62983;Q9CR00
TCF dependent signaling in response to WNT	4	E9PW69;P62983;P27467;Q9CR00
Transmission across Chemical Synapses	4	Q571F8;P15105;P17427;P47738
Signaling by the B Cell Receptor (BCR)	4	P01872;E9PW69;P62983;Q9CR00
RHO GTPase Effectors	4	P99024;E9Q5F4;P68368;P68373
Synthesis of Ketone Bodies	3	P38060;Q80XN0;Q8QZT1
Ketone body metabolism	3	P38060;Q80XN0;Q8QZT1
Sulfide oxidation to sulfate	3	Q9DCM0;P52196;Q9QZD8
Beta-oxidation of pristanoyl-CoA	3	P32020;P51660;Q9QXD1
Folding of actin by CCT/TriC	3	P80316;E9Q5F4;P80313
Urea cycle	3	Q8C196;Q61176;J3QNG0
Phenylalanine and tyrosine catabolism	3	D3YWR7;O09173;P16331
Purine catabolism	3	P11352;P24270;Q00519

Gamma-carboxylation, transport, and amino-terminal cleavage of proteins	3	Q9CRC0;P33587
Microtubule-dependent trafficking of connexons from Golgi to the plasma membrane	3	P99024;P68368;P68373
alpha-linolenic acid (ALA) metabolism	3	P32020;P51660;Q8VCH0
alpha-linolenic (omega3) and linoleic (omega6) acid metabolism	3	P32020;P51660;Q8VCH0
Transport of connexons to the plasma membrane	3	P99024;P68368;P68373
Gap junction assembly	3	P99024;P68368;P68373
Post-chaperonin tubulin folding pathway	3	P99024;P68368;P68373
Metabolism of porphyrins	3	P36552;P22315;Q63886
Recycling of bile acids and salts	3	P07724;Q91X34;Q4LDG0
Synthesis of bile acids and bile salts via 24-hydroxycholesterol	3	G3X9Y6;D3Z3P8;Q4LDG0
NOTCH2 Activation and Transmission of Signal to the Nucleus	3	Q61483;P62983;Q9QYE5
Synthesis of Prostaglandins (PG) and Thromboxanes (TX)	3	G3X9Y6;D3Z3P8;P48758
Basigin interactions	3	O35308;P14094;P17742
Glutathione conjugation	3	P10649;E9Q484;P30115
Activated NOTCH1 Transmits Signal to the Nucleus	3	Q61483;P62983;Q9QYE5
Signaling by NOTCH2	3	Q61483;P62983;Q9QYE5
Kinesins	3	P99024;P68368;P68373
Defensins	3	Q792Z1;P07146;O54689
Formation of Fibrin Clot (Clotting Cascade)	3	P33587;Q8K0E8;D3Z2B2

Regulation of activated PAK-2p34 by proteasome mediated degradation	3	E9PW69;P62983;Q9CR00
Regulation of Apoptosis	3	E9PW69;P62983;Q9CR00
CDK-mediated phosphorylation and removal of Cdc6	3	E9PW69;P62983;Q9CR00
Autodegradation of the E3 ubiquitin ligase COP1	3	E9PW69;P62983;Q9CR00
Ubiquitin-dependent degradation of Cyclin D1	3	E9PW69;P62983;Q9CR00
Ubiquitin-dependent degradation of Cyclin D	3	E9PW69;P62983;Q9CR00
Retinoid metabolism and transport	3	G3X9Y6;B1B0C7;D3Z3P8
Stabilization of p53	3	E9PW69;P62983;Q9CR00
SCF-beta-TrCP mediated degradation of Emi1	3	E9PW69;P62983;Q9CR00
degradation of AXIN	3	E9PW69;P62983;Q9CR00
AUF1 (hnRNP D0) destabilizes mRNA	3	E9PW69;P62983;Q9CR00
degradation of DVL	3	E9PW69;P62983;Q9CR00
SCF(Skp2)-mediated degradation of p27/p21	3	E9PW69;P62983;Q9CR00
p53-Dependent G1 DNA Damage Response	3	E9PW69;P62983;Q9CR00
p53-Dependent G1/S DNA damage checkpoint	3	E9PW69;P62983;Q9CR00
Intraflagellar transport	3	P99024;P68368;P68373
Degradation of GLI1 by the proteasome	3	E9PW69;P62983;Q9CR00
GLI3 is processed to GLI3R by the proteasome	3	E9PW69;P62983;Q9CR00
Degradation of GLI2 by the proteasome	3	E9PW69;P62983;Q9CR00

Asymmetric localization of PCP proteins	3	E9PW69;P62983;Q9CR00
CDT1 association with the CDC6:ORC:origin complex	3	E9PW69;P62983;Q9CR00
Translocation of GLUT4 to the plasma membrane	3	E9Q5F4;P68368;P68373
Activation of NF-kappaB in B cells	3	E9PW69;P62983;Q9CR00
Assembly of the pre-replicative complex	3	E9PW69;P62983;Q9CR00
Orc1 removal from chromatin	3	E9PW69;P62983;Q9CR00
Switching of origins to a post-replicative state	3	E9PW69;P62983;Q9CR00
Removal of licensing factors from origins	3	E9PW69;P62983;Q9CR00
Regulation of DNA replication	3	E9PW69;P62983;Q9CR00
Cytosolic sensors of pathogen-associated DNA	3	P97313;P62983;Q8CGE8
DNA Replication Pre-Initiation	3	E9PW69;P62983;Q9CR00
M/G1 Transition	3	E9PW69;P62983;Q9CR00
Degradation of beta-catenin by the destruction complex	3	E9PW69;P62983;Q9CR00
Signaling by NOTCH1	3	Q61483;P62983;Q9QYE5
Synthesis of DNA	3	E9PW69;P62983;Q9CR00
Signaling by NOTCH	3	Q61483;P62983;Q9QYE5
DNA Replication	3	E9PW69;P62983;Q9CR00
Cellular Senescence	3	A2A6Q5;P62983;D3Z4F9
Asparagine N-linked glycosylation	3	P14211;Q9CPT3;P27046
Resolution of Sister Chromatid Cohesion	3	P99024;P68368;P68373
Mitotic Prometaphase	3	P99024;P68368;P68373
Toll-Like Receptors Cascades	3	P10605;P62983;Q08857
Apoptosis	3	E9PW69;P62983;Q9CR00

Programmed Cell Death	3	E9PW69;P62983;Q9CR00
G alpha (q) signalling events	3	P43117;Q9EQ31;D3Z2B2
Mus musculus biological processes	3	O35718;P62983;P97742
Peptide ligand-binding receptors	3	P01027;O54689;D3Z2B2
Downstream signaling events of B Cell Receptor (BCR)	3	E9PW69;P62983;Q9CR00
Ion channel transport	3	P62983;P14094;Q8VDN2
Gastrin-CREB signalling pathway via PKC and MAPK	3	P43117;Q9EQ31;D3Z2B2
Signalling by NGF	3	P62983;P17427;Q99PT1
Insulin effects increased synthesis of Xylulose-5-Phosphate	2	Q93092;P40142
5-Phosphoribose 1-diphosphate biosynthesis	2	G3UXL2
Utilization of Ketone Bodies	2	Q80XN0;Q8QZT1
Histidine catabolism	2	Q8VC12;Q91XD4
Fructose metabolism	2	Q64442;Q91Y97
Abacavir metabolism	2	P00329;Q9Z2V4
Glyoxylate metabolism	2	Q3UEG6;Q91Z53
Beta-oxidation of very long chain fatty acids	2	P51660;Q8VCH0
Digestion of dietary carbohydrate	2	P00688
Pentose phosphate pathway (hexose monophosphate shunt)	2	Q93092;P40142
Lysine catabolism	2	Q60759;Q99K67
Abacavir transport and metabolism	2	P00329;Q9Z2V4
Methylation	2	Q91X83;P50247
Keratan sulfate degradation	2	Q9JK53;P20060
Heme biosynthesis	2	P36552;P22315
Signaling by NOTCH3	2	Q61483;Q9QYE5

Pyrimidine catabolism	2	Q8CHR6;Q3UEG6
O2/CO2 exchange in erythrocytes	2	A8DUK4
Erythrocytes take up oxygen and release carbon dioxide	2	A8DUK4
Erythrocytes take up carbon dioxide and release oxygen	2	A8DUK4
Signaling by NOTCH4	2	Q61483;Q9QYE5
Golgi to ER Retrograde Transport	2	H3BIX5;Q9QZE5
COPI Mediated Transport	2	H3BIX5;Q9QZE5
Mitochondrial Fatty Acid Beta-Oxidation	2	P42125;Q8BMS1
Glycogen synthesis	2	Q9D0F9;P62983
Glucuronidation	2	K9J7B2;Q63886
Glycogen breakdown (glycogenolysis)	2	Q9D0F9;Q3UEJ6
regulation of FZD by ubiquitination	2	P62983;P27467
Oncogene Induced Senescence	2	P62983;D3Z4F9
APC/C:Cdc20 mediated degradation of Cyclin B	2	A2A6Q5;P62983
Fatty Acyl-CoA Biosynthesis	2	P19096;Q8JZR0
Synthesis of bile acids and bile salts via 27-hydroxycholesterol	2	G3X9Y6;D3Z3P8
VxPx cargo-targeting to cilium	2	P15409;H3BIX5
APC-Cdc20 mediated degradation of Nek2A	2	A2A6Q5;P62983
Pyruvate metabolism	2	O35308;Q8BMF4
Common Pathway of Fibrin Clot Formation	2	P33587;Q8K0E8
Regulation of Complement cascade	2	P01027;P29788

IRF3-mediated induction of type I IFN	2	P97313;Q8CGE8
Pyrimidine metabolism	2	Q8CHR6;Q3UEG6
Intrinsic Pathway of Fibrin Clot Formation	2	P33587;D3Z2B2
HS-GAG degradation	2	B1B0C7;D3Z3C3
Lipoprotein metabolism	2	P07724;B1B0C7
Translesion Synthesis by POLH	2	P62983;Q01853
Negative regulators of RIG-I/MDA5 signaling	2	P62983;Q8VCF0
Cytosolic sulfonation of small molecules	2	D3Z2P8;D3Z0E6
STING mediated induction of host immune responses	2	P97313;Q8CGE8
Keratan sulfate/keratin metabolism	2	Q9JK53;P20060
EGFR downregulation	2	P62983;P17427
Circadian Clock	2	P62983;P97742
Molecules associated with elastic fibres	2	P29788;Q9R229
Alpha-defensins	2	Q792Z1;P07146
Association of TriC/CCT with target proteins during biosynthesis	2	P80316;P80313
Cargo trafficking to the periciliary membrane	2	P15409;H3BIX5
Triglyceride Biosynthesis	2	P19096;Q8JZR0
Complement cascade	2	P01027;P29788
Elastic fibre formation	2	P29788;Q9R229
Senescence-Associated Secretory Phenotype (SASP)	2	A2A6Q5;P62983

Translesion synthesis by Y family DNA polymerases bypasses lesions on DNA template	2	P62983;Q01853
Transport of vitamins, nucleosides, and related molecules	2	P07724;Q61672
Cross-presentation of soluble exogenous antigens (endosomes)	2	E9PW69;Q9CR00
Lipid digestion, mobilization, and transport	2	P07724;B1B0C7
Regulation of ornithine decarboxylase (ODC)	2	E9PW69;Q9CR00
Mitochondrial protein import	2	Q9WVA2;Q9QXX4
DNA Damage Bypass	2	P62983;Q01853
Ion transport by P-type ATPases	2	P14094;Q8VDN2
Chondroitin sulfate/dermatan sulfate metabolism	2	B1B0C7;P20060
Heparan sulfate/heparin (HS-GAG) metabolism	2	B1B0C7;D3Z3C3
Nucleotide Excision Repair	2	Q9DCD2;P51612
Semaphorin interactions	2	O08553;Q3V3R4
RIG-I/MDA5 mediated induction of IFN-alpha/beta pathways	2	P62983;Q8VCF0
Clathrin derived vesicle budding	2	H3BIX5;Q07113
trans-Golgi Network Vesicle Budding	2	H3BIX5;Q07113
Toll Like Receptor TLR6:TLR2 Cascade	2	P62983;Q08857
Toll Like Receptor 2 (TLR2) Cascade	2	P62983;Q08857

MyD88:Mal cascade initiated on plasma membrane	2	P62983;Q08857
Toll Like Receptor TLR1:TLR2 Cascade	2	P62983;Q08857
Activated TLR4 signalling	2	P62983;Q08857
Signaling by Interleukins	2	O35718;P62983
p75 NTR receptor-mediated signalling	2	P62983;Q99PT1
Toll Like Receptor 4 (TLR4) Cascade	2	P62983;Q08857
Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell	2	P35762;P01027
ER-Phagosome pathway	2	E9PW69;P14211
mRNA Splicing	2	P62320;P60335
mRNA Splicing - Major Pathway	2	P62320;P60335
Processing of Capped Intron-Containing Pre-mRNA	2	P62320;P60335
Antigen processing-Cross presentation	2	E9PW69;P14211
Signaling by EGFR	2	P62983;P17427
Class I MHC mediated antigen processing & presentation	2	E9PW69;P14211
Cytokine Signaling in Immune system	2	O35718;P62983
Adaptive Immune System	2	E9PW69;P14211
Olfactory Signaling Pathway	2	Q7TRG2
Immune System	2	E9PW69;P14211
NADPH regeneration	1	O88844
DNA Damage Recognition in GG-NER	1	P51612
Cysteine formation from homocysteine	1	Q8VCN5

Fructose biosynthesis	1	Q64442
Proline catabolism	1	Q8CHT0
Metabolism of serotonin	1	P47738
Serotonin clearance from the synaptic cleft	1	P47738
Beta oxidation of myristoyl-CoA to lauroyl-CoA	1	Q8BMS1
Beta oxidation of palmitoyl-CoA to myristoyl-CoA	1	Q8BMS1
mitochondrial fatty acid beta-oxidation of unsaturated fatty acids	1	P42125
Fructose catabolism	1	Q91Y97
Proton-coupled monocarboxylate transport	1	O35308
Opsins	1	P15409
Astrocytic Glutamate-Glutamine Uptake And Metabolism	1	P15105
Neurotransmitter uptake and Metabolism In Glial Cells	1	P15105
Reactions specific to the complex N-glycan synthesis pathway	1	P27046
Carnitine synthesis	1	Q9JLJ2
Alternative complement activation	1	P01027
Processing of DNA ends prior to end rejoining	1	P97313
Cyclin B2 mediated events	1	P48964
Synthesis of 5-eicosatetraenoic acids	1	P11352
Synthesis of 12-eicosatetraenoic acid derivatives	1	P11352
Beta defensins	1	O54689

Galactose catabolism	1	Q9D0F9
Beta oxidation of lauroyl-CoA to decanoyl-CoA-CoA	1	Q8BMS1
Beta oxidation of hexanoyl-CoA to butanoyl-CoA	1	Q8BMS1
Beta oxidation of decanoyl-CoA to octanoyl-CoA-CoA	1	Q8BMS1
Beta oxidation of octanoyl-CoA to hexanoyl-CoA	1	Q8BMS1
Scavenging by Class F Receptors	1	P14211
Scavenging by Class B Receptors	1	Q08857
Synthesis of 15-eicosatetraenoic acid derivatives	1	P11352
Neurotransmitter Clearance In The Synaptic Cleft	1	P47738
Activation of C3 and C5	1	P01027
Nonhomologous End-joining (NHEJ)	1	P97313
Vitamin D (calciferol) metabolism	1	P21614
Ubiquinol biosynthesis	1	Q8BMS4
Glutathione synthesis and recycling	1	E9Q484
Synthesis of diphthamide-EEF2	1	P58252
Axonal growth stimulation	1	Q99PT1
Heme degradation	1	Q63886
mitochondrial fatty acid beta-oxidation of saturated fatty acids	1	Q8BMS1
Metabolism of folate and pterines	1	Q922D8
Organic anion transporters	1	Q9QZD8
CHL1 interactions	1	Q3V3R4

Transport of nucleosides and free purine and pyrimidine bases across the plasma membrane	1	Q61672
HSF1 activation	1	Q01853
Transport of gamma-carboxylated protein precursors from the endoplasmic reticulum to the Golgi apparatus	1	P33587
eNOS activation	1	D3YUG4 Q08857
Cross-presentation of particulate exogenous antigens (phagosomes)	1	
Downregulation of ERBB4 signaling	1	P62983
Lysosphingolipid and LPA receptors	1	Q9EQ31
Removal of aminoterminal propeptides from gamma-carboxylated proteins	1	P33587
Gamma-carboxylation of protein precursors	1	P33587
SLBP independent Processing of Histone Pre-mRNAs	1	P62320
mRNA decay by 3' to 5' exoribonuclease	1	D3YTN9
Activation of the phototransduction cascade	1	P15409
Synthesis, secretion, and inactivation of Glucose-dependent Insulinotropic Polypeptide (GIP)	1	P28843
Prostanoid ligand receptors	1	P43117
IRAK2 mediated activation of TAK1 complex	1	P62983

IRAK2 mediated activation of TAK1 complex upon TLR7/8 or 9 stimulation	1	P62983
Dissolution of Fibrin Clot	1	P20918
SLBP Dependent Processing of Replication-Dependent Histone Pre-mRNAs	1	P62320
E2F-enabled inhibition of pre-replication complex formation	1	P48964
negative regulation of TCF-dependent signaling by WNT ligand antagonists	1	P27467
Signaling by Leptin	1	O35718
Rora activates gene expression	1	P97742
Tryptophan catabolism	1	Q78JT3
Regulation of the Fanconi anemia pathway	1	P62983
Reversible hydration of carbon dioxide	1	P16015
Trafficking and processing of endosomal TLR	1	P10605
NF-kB activation through FADD/RIP-1 pathway mediated by caspase-8 and -10	1	Q8VCF0
Formation of annular gap junctions	1	E9Q5F4
Axonal growth inhibition (RHOA activation)	1	Q99PT1
Acyl chain remodeling of CL	1	Q8BMS1
Vitamin B5 (pantothenate) metabolism	1	P19096
p75NTR regulates axonogenesis	1	Q99PT1
Calnexin/calreticulin cycle	1	P14211

Import of palmitoyl-CoA into the mitochondrial matrix	1	P97742
Purine ribonucleoside monophosphate biosynthesis	1	P46664
HDL-mediated lipid transport	1	P07724
Regulation of pyruvate dehydrogenase (PDH) complex	1	Q8BMF4
TRAF3-dependent IRF activation pathway	1	Q8VCF0
Biotin transport and metabolism	1	G5E8R3
Spry regulation of FGF signaling	1	P62983
ChREBP activates metabolic gene expression	1	P19096
Cobalamin (Cbl, vitamin B12) transport and metabolism	1	A2AQT8
Eicosanoid ligand-binding receptors	1	P43117
p130Cas linkage to MAPK signaling for integrins	1	Q8K0E8
Phosphorylation of the APC/C	1	A2A6Q5
GRB2:SOS provides linkage to MAPK signaling for Integrins	1	Q8K0E8
Conversion from APC/C:Cdc20 to APC/C:Cdh1 in late anaphase	1	A2A6Q5
CRMPs in Sema3A signaling	1	O08553
Transport of organic anions	1	P07724
Association of licensing factors with the pre-replicative complex	1	P62983
N-glycan trimming in the ER and Calnexin/Calreticulin cycle	1	P14211
IRAK1 recruits IKK complex	1	P62983
IRAK1 recruits IKK complex upon TLR7/8 or 9 stimulation	1	P62983

Tristetraprolin (TTP) destabilizes mRNA	1	D3YTN9
KSRP destabilizes mRNA	1	D3YTN9
TRAF6 mediated IRF7 activation in TLR7/8 or 9 signaling	1	P62983
Synthesis, secretion, and inactivation of Glucagon-like Peptide-1 (GLP-1)	1	P28843
Butyrate Response Factor 1 (BRF1) destabilizes mRNA	1	D3YTN9
The canonical retinoid cycle in rods (twilight vision)	1	P15409
Synthesis of very long-chain fatty acyl-CoAs	1	Q8JZR0
Interleukin-6 signaling	1	O35718
Chylomicron-mediated lipid transport	1	B1B0C7
Retrograde neurotrophin signalling	1	P17427
TRAF6 mediated induction of TAK1 complex	1	P62983
Downregulation of ERBB2:ERBB3 signaling	1	P62983
Inactivation of APC/C via direct inhibition of the APC/C complex	1	A2A6Q5
Inhibition of the proteolytic activity of APC/C required for the onset of anaphase by mitotic spindle checkpoint components	1	A2A6Q5
NF-kB is activated and signals survival	1	P62983
Scavenging by Class A Receptors	1	P14211

Incretin synthesis, secretion, and inactivation	1	P28843
Miscellaneous substrates	1	Q64459
Platelet Adhesion to exposed collagen	1	Q3V3R4
p75NTR recruits signalling complexes	1	P62983
CD28 dependent PI3K/Akt signaling	1	Q9WUL6
Regulation of necroptotic cell death	1	P62983
Mitotic Spindle Checkpoint	1	A2A6Q5
Hyaluronan uptake and degradation	1	P20060
Other semaphorin interactions	1	Q3V3R4
TGF-beta receptor signaling in EMT (epithelial to mesenchymal transition)	1	P62983
Activation of IRF3/IRF7 mediated by TBK1/IKK epsilon	1	P62983
Gap junction degradation	1	E9Q5F4
Formation of ATP by chemiosmotic coupling	1	B1ASE2
p75NTR signals via NF-kB	1	P62983
CS/DS degradation	1	P20060
N-glycan antennae elongation in the medial/trans-Golgi	1	P27046
RIPK1-mediated regulated necrosis	1	P62983
Regulated Necrosis	1	P62983
Synthesis and interconversion of nucleotide di- and triphosphates	1	Q5NC80
Trafficking of AMPA receptors	1	P17427

Trafficking of GluR2-containing AMPA receptors	1	P17427
WNT5A-dependent internalization of FZD4	1	P17427
Glutamate Binding, Activation of AMPA Receptors and Synaptic Plasticity	1	P17427
Regulation of signaling by CBL	1	P62983
Hyaluronan metabolism	1	P20060
Initial triggering of complement	1	P01027
Oxygen-dependent proline hydroxylation of Hypoxia-inducible Factor Alpha	1	P62983
Regulation of IFNG signaling	1	O35718
activated TAK1 mediates p38 MAPK activation	1	P62983
Cell-extracellular matrix interactions	1	E9Q5F4
Metabolism of nitric oxide	1	D3YUG4
eNOS activation and regulation	1	D3YUG4
NRIF signals cell death from the nucleus	1	P62983
Cyclin A/B1 associated events during G2/M transition	1	P48964
snRNP Assembly	1	P62320
Metabolism of non-coding RNA	1	P62320
Translesion synthesis by REV1	1	P62983
Regulation of innate immune responses to cytosolic DNA	1	P62983
IKK complex recruitment mediated by RIP1	1	P62983
Synthesis of epoxy (EET) and dihydroxyicosatrienoic acids (DHET)	1	Q6XVG2

Translesion synthesis by POLI	1	P62983
Translesion synthesis by POLK	1	P62983
Keratan sulfate biosynthesis	1	Q9JK53
Processing of Capped Intronless Pre-mRNA	1	P62320
JNK (c-Jun kinases) phosphorylation and activation mediated by activated human TAK1	1	P62983
Endosomal Sorting Complex Required For Transport (ESCRT)	1	P62983
Cellular response to hypoxia	1	P62983
Regulation of Hypoxia-inducible Factor (HIF) by oxygen	1	P62983
Activation of gene expression by SREBF (SREBP)	1	P19096
Dual incision reaction in GG-NER	1	P51612
Formation of incision complex in GG-NER	1	P51612
Integrin alphaIIb beta3 signaling	1	Q8K0E8
Circadian Clock	1	P62983
HS-GAG biosynthesis	1	B1B0C7
Interaction between L1 and Ankyrins	1	E9Q5F4
WNT ligand biogenesis and trafficking	1	P27467
Inactivation, recovery and regulation of the phototransduction cascade	1	P15409
Synthesis of (16-20)-hydroxyeicosatetraenoic acids (HETE)	1	Q6XVG2

The phototransduction cascade	1	P15409
SMAD2/SMAD3:SMAD4 heterotrimer regulates transcription	1	P62983
CD28 co-stimulation	1	Q9WUL6
RHO GTPases Activate WASPs and WAVES	1	E9Q5F4
G0 and Early G1	1	P48964
Syndecan interactions	1	P29788
NOD1/2 Signaling Pathway	1	P62983
TRAF6 mediated NF-kB activation	1	Q8VCF0
Negative regulation of FGFR4 signaling	1	P62983
Regulation of Insulin-like Growth Factor (IGF) transport and uptake by Insulin-like Growth Factor Binding Proteins (IGFBPs)	1	P20918
Transferrin endocytosis and recycling	1	Q921I1
E2F mediated regulation of DNA replication	1	P48964
A tetrasaccharide linker sequence is required for GAG synthesis	1	B1B0C7
Downregulation of TGF-beta receptor signaling	1	P62983
Negative regulation of FGFR1 signaling	1	P62983
Glutamate Neurotransmitter Release Cycle	1	Q571F8
FCERI mediated NF-kB activation	1	P62983

Glycosphingolipid metabolism	1	P20060
Recognition of DNA damage by PCNA-containing replication complex	1	P62983
Metabolism of steroid hormones and vitamin D	1	P21614
Signaling by Leptin	1	O35718
Regulation of Glucokinase by Glucokinase Regulatory Protein	1	Q91X44
TAK1 activates NFkB by phosphorylation and activation of IKKs complex	1	P62983
Negative regulation of FGFR3 signaling	1	P62983
Double-Strand Break Repair	1	P97313
Fanconi Anemia pathway	1	P62983
TRAF6 mediated IRF7 activation	1	Q8VCF0
Adherens junctions interactions	1	E9Q5F4
Sialic acid metabolism	1	Q9CPT3
Dual incision reaction in TC-NER	1	Q9DCD2
disassembly of the destruction complex and recruitment of AXIN to the membrane	1	P27467
Platelet Aggregation (Plug Formation)	1	Q8K0E8
Formation of transcription-coupled NER (TC-NER) repair complex	1	Q9DCD2
Termination of translesion DNA synthesis	1	P62983
TGF-beta receptor signaling activates SMADs	1	P62983

Activation of ATR in response to replication stress	1	P48964
G1 Phase	1	P62983
Cyclin D associated events in G1	1	P62983
Antigen activates B Cell Receptor (BCR) leading to generation of second messengers	1	P01872
Interferon alpha/beta signaling	1	O35718
Smooth Muscle Contraction	1	Q3V3R4
Transport to the Golgi and subsequent modification	1	P27046
Downregulation of SMAD2/3:SMAD4 transcriptional activity	1	P62983
Glucose transport	1	Q91X44
Interleukin-1 signaling	1	P62983
Vasopressin regulates renal water homeostasis via Aquaporins	1	G5E8G6
Deadenylation-dependent mRNA decay	1	D3YTN9
Cell-cell junction organization	1	E9Q5F4
Regulation of cholesterol biosynthesis by SREBP (SREBF)	1	P19096
mRNA Splicing - Minor Pathway	1	P62320
Hexose transport	1	Q91X44
Iron uptake and transport	1	Q921I1
Downstream TCR signaling	1	P62983
deactivation of the beta-catenin transactivating complex	1	P62983

Voltage gated Potassium channels	1	Q8VD73
Nucleotide-binding domain, leucine rich repeat containing receptor (NLR) signaling pathways	1	P62983
Chemokine receptors bind chemokines	1	O54689
Interleukin-3, 5 and GM-CSF signaling	1	P62983
Global Genomic NER (GG-NER)	1	P51612
G2/M Checkpoints	1	P48964
Aquaporin-mediated transport	1	G5E8G6
Negative regulation of FGFR2 signaling	1	P62983
Assembly of collagen fibrils and other multimeric structures	1	P10605
Synthesis of substrates in N-glycan biosynthesis	1	Q9CPT3
EPHB-mediated forward signaling	1	E9Q5F4
Growth hormone receptor signaling	1	O35718
Neurotransmitter Release Cycle	1	Q571F8
Regulation of actin dynamics for phagocytic cup formation	1	E9Q5F4
NOTCH1 Intracellular Domain Regulates Transcription	1	P62983
Oxidative Stress Induced Senescence	1	P62983
Golgi Associated Vesicle Biogenesis	1	Q07113
Peptide hormone metabolism	1	P28843

Transcriptional activity of SMAD2/SMAD3:SMAD4 heterotrimer	1	P62983
Class B/2 (Secretin family receptors)	1	P27467
Transcription-coupled NER (TC-NER)	1	Q9DCD2
MAP kinase activation in TLR cascade	1	P62983
TCR signaling	1	P62983
Sphingolipid metabolism	1	P20060
Biosynthesis of the N-glycan precursor (dolichol lipid-linked oligosaccharide, LLO) and transfer to a nascent protein	1	Q9CPT3
RNA Polymerase II Transcription Termination	1	P62320
Cleavage of Growing Transcript in the Termination Region	1	P62320
Costimulation by the CD28 family	1	Q9WUL6
Collagen degradation	1	P10605
Cell junction organization	1	E9Q5F4
Regulation of insulin secretion	1	P51881
Fcgamma receptor (FCGR) dependent phagocytosis	1	E9Q5F4
Muscle contraction	1	Q3V3R4
SUMOylation of DNA damage response and repair proteins	1	P51612
SUMO E3 ligases SUMOylate target proteins	1	P51612
Cellular response to heat stress	1	Q01853
Toll Like Receptor 5 (TLR5) Cascade	1	P62983

Toll Like Receptor 10 (TLR10) Cascade	1	P62983
MyD88 cascade initiated on plasma membrane	1	P62983
SUMOylation	1	P51612
TRAF6 mediated induction of NFkB and MAP kinases upon TLR7/8 or 9 activation	1	P62983
Collagen formation	1	P10605
MyD88 dependent cascade initiated on endosome	1	P62983
Toll Like Receptor 7/8 (TLR7/8) Cascade	1	P62983
Signaling by TGF-beta Receptor Complex	1	P62983
Toll Like Receptor 9 (TLR9) Cascade	1	P62983
EPH-Ephrin signaling	1	E9Q5F4
Antigen Presentation: Folding, assembly and peptide loading of class I MHC	1	P14211
TRIF-mediated TLR3/TLR4 signaling	1	P62983
Toll Like Receptor 3 (TLR3) Cascade	1	P62983
MyD88-independent TLR3/TLR4 cascade	1	P62983
Glycerophospholipid biosynthesis	1	Q8BMS1 O35308
Transport of glucose and other sugars, bile salts and organic acids, metal ions and amine compounds	1	
Stimuli-sensing channels	1	P62983

Cell death signalling via NRAGE, NRIF and NADE	1	P62983
HATs acetylate histones	1	E9Q5F4
Potassium Channels	1	Q8VD73
VEGFA-VEGFR2 Pathway	1	E9Q5F4
Signaling by VEGF	1	E9Q5F4
Cell-Cell communication	1	E9Q5F4
RNA Polymerase II Transcription	1	P62320
Transport of inorganic cations/anions and amino acids/oligopeptides	1	Q9QZD8
Neurotransmitter Receptor Binding And Downstream Transmission In The Postsynaptic Cell	1	P17427
Phospholipid metabolism	1	Q8BMS1
Rho GTPase cycle	1	Q99PT1
Interferon gamma signaling	1	O35718
Signaling by ERBB2	1	P62983
Signaling by FGFR4	1	P62983
Signaling by FGFR3	1	P62983
Signaling by FGFR1	1	P62983
Signaling by FGFR	1	P62983
Signaling by FGFR2	1	P62983
Fc epsilon receptor (FCERI) signaling	1	P62983
Signaling by ERBB4	1	P62983
Signaling by PDGF	1	P20918
NGF signalling via TRKA from the plasma membrane	1	P17427
Interferon Signaling	1	O35718
Chromatin modifying enzymes	1	E9Q5F4
Chromatin organization	1	E9Q5F4

^a Pathway is searched using the REACTOME database. ^b Number of proteins identified in each pathway. ^c Accession number provided from the Uni