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Citation for final published version:

Munir, Arooj, Døskeland, Anne, Avery, Steven J., Fuoco, Tiziana, Mohamed-Ahmed, Samih, Lygre, Henning, Finne-Wistrand, Anna, Sloan, Alastair J. , Waddington, Rachel J. , Mustafa, Kamal and Suliman, Salwa 2019. Efficacy of copolymer scaffolds delivering human demineralised dentine matrix for bone regeneration. *Journal of Tissue Engineering* 10 , p. 204173141985270. 10.1177/2041731419852703

Publishers page: <http://dx.doi.org/10.1177/2041731419852703>

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## Supporting Information

### Efficacy of copolymer scaffolds delivering human demineralised dentine matrix for bone regeneration.

Arooj Munir, Anne Døskeland, Steven J. Avery, Tiziana Fuoco, Samih Mohamed-Ahmed, Henning Lygre, Anna Finne-Wistrand, Alastair J. Sloan, Rachel J. Waddington, Kamal Mustafa\*, Salwa Suliman\*

**Table S1:** Identified proteins and their biological functions and cellular locations. Red proteins were identified in *MaxQuant* only, blue proteins were identified in *Scaffold* only and black proteins were present in both *Scaffold* and *MaxQuant*.

Protein ID	Protein names	Gene names	Peptide	Biological function	Cellular location
O15240	Neurosecretory protein VGF	VGF	2	Cell communication	Extracellular
Q96PV0	Ras/Rap GTPase-activating protein SynGAP	SYNGAP1	2	Cell communication	Cytoplasmic vesicle
A7E2Y1	Myosin-7B	MYH7B	1	Growth and maintenance	Cytoplasm
O15041	Semaphorin-3E	SEMA3E	1	Growth and maintenance	Extracellular
O60333	Kinesin-like protein KIF1B	KIF1B	1	Growth and maintenance	Cytoplasmic vesicle
O75339	Cartilage intermediate layer protein 1	CILP	2	Growth and maintenance	Extracellular
O95810	Serum deprivation-response protein	SDPR	1	Growth and maintenance	Cytoplasm
P01033	Metalloproteinase inhibitor 1	TIMP1	1	Growth and maintenance	Extracellular
P02452	Collagen alpha-1(I) chain	COL1A1	22	Growth and maintenance	Extracellular
P02545	Prelamin-A/C; Lamin-A/C	LMNA	5	Growth and maintenance	Nucleus
P04004	Vitronectin	VTN	11	Growth and maintenance	Extracellular
P05997	Collagen alpha-2(V) chain	COL5A2	1	Growth and maintenance	Extracellular
P07437	Tubulin beta chain	TUBB	3	Growth and maintenance	Cytoplasm
P07737	Profilin-1	PFN1	2	Growth and maintenance	Cytoplasm
P07996	Thrombospondin-1	THBS1	6	Growth and maintenance	Extracellular
P08123	Collagen alpha-2(I) chain	COL1A2	13	Growth and maintenance	Extracellular
P08670	Vimentin	VIM	20	Growth and maintenance	Intermediate filament
P09486	SPARC	SPARC	9	Growth and maintenance	Extracellular
P10451	Osteopontin	SPP1	2	Growth and maintenance	Extracellular
P11532	Dystrophin	DMD	1	Growth and maintenance	Cytoplasm
P12111	Collagen alpha-3(VI) chain	COL6A3	2	Growth and maintenance	Extracellular

P13942	Collagen alpha-2(XI) chain	COL11A2	15	Growth and maintenance	Extracellular
P15924	Desmoplakin	DSP	101	Growth and maintenance	Plasma membrane
P18206	Vinculin	VCL	2	Growth and maintenance	Cytoplasm
P20929	Nebulin	NEB	1	Growth and maintenance	Cytoplasm
P21810	Biglycan	BGN	13	Growth and maintenance	Extracellular
P35321;P22528	Cornifin-A; Cornifin-B	SPRR1A;SPRR1B	3	Growth and maintenance	Cytoplasm
P35326	Small proline-rich protein 2A	SPRR2A	2	Growth and maintenance	Cytoplasm
P23490	Loricrin	LOR	2	Growth and maintenance	Cytoplasm
P23528;Q9Y281	Cofilin-1; Cofilin-2	CFL1;CFL2	2	Growth and maintenance	Cytoplasm
P35555	Fibrillin-1	FBN1	2	Growth and maintenance	Extracellular
P47756	F-actin-capping protein subunit beta	CAPZB	1	Growth and maintenance	Cytoskeleton
P47929	Galectin-7	LGALS7	5	Growth and maintenance	Extracellular
P62328	Thymosin beta-4	TMSB4X	1	Growth and maintenance	Cytoplasm
P62805	Histone H4	HIST1H4A	7	Growth and maintenance	Nucleus
P63261;P60709	Actin, cytoplasmic 2; Actin, cytoplasmic 1	ACTG1;ACTB	15	Growth and maintenance	Cytoplasm
P68133;P68032;P63267;P62736	Actin, alpha skeletal muscle;Actin, alpha cardiac muscle 1; Actin, gamma-enteric smooth muscle; Actin, aortic smooth muscle	ACTA1;ACTC1;ACTG2;ACTA2	9	Growth and maintenance	Cytoplasm
Q9BQE3;Q71U36;P68363	Tubulin alpha-1C chain; Tubulin alpha-1A chain; Tubulin alpha-1B chain	TUBA1C;TUBA1A;TUBA1B	1	Growth and maintenance	Cytoplasm
Q02241	Kinesin-like protein KIF23	KIF23	1	Growth and maintenance	Nucleus
Q02413	Desmoglein-1	DSG1	30	Growth and maintenance	Plasma membrane
Q02952	A-kinase anchor protein 12	AKAP12	1	Growth and maintenance	Plasma membrane
Q08554	Desmocollin-1	DSC1	14	Growth and maintenance	Plasma membrane
Q13316	Dentin matrix acidic phosphoprotein 1	DMP1	3	Growth and maintenance	Extracellular
Q13702	43 kDa receptor-associated protein of the synapse	RAPSN	1	Growth and maintenance	Cytoplasm
Q14574	Desmocollin-3	DSC3	5	Growth and maintenance	Plasma membrane
Q15058	Kinesin-like protein KIF14	KIF14	2	Growth and maintenance	Microtubule
Q15113	Procollagen C-endopeptidase enhancer 1	PCOLCE	9	Growth and maintenance	Plasma membrane
Q15517	Corneodesmosin	CDSN	3	Growth and maintenance	Plasma membrane
Q16610	Extracellular matrix protein 1	ECM1	4	Growth and maintenance	Extracellular
Q6TDP4	Kelch-like protein 17	KLHL17	2	Growth and maintenance	Cytoskeleton
Q8N8S7	Protein enabled homolog	ENAH	1	Growth and maintenance	Cytoplasm

Q99983	Osteomodulin	OMD	9	Growth and maintenance	Extracellular
Q9NP70	Ameloblastin	AMBN	1	Growth and maintenance	Cytoplasm
Q9NPE2	Neugrin	NGRN	1	Growth and maintenance	Nucleus
Q9NRN5	Olfactomedin-like protein 3	OLFML3	3	Growth and maintenance	Extracellular
Q9NS15	Latent-transforming growth factor beta-binding protein 3	LTBP3	6	Growth and maintenance	Extracellular
Q9NZW4	Dentin sialophosphoprotein	DSPP	8	Growth and maintenance	Extracellular
Q9Y2G1	Myelin regulatory factor	MYRF	1	Growth and maintenance	unknown
Q9Y2M5	Kelch-like protein 20	KLHL20	1	Growth and maintenance	Cytoskeleton
P02458	Collagen alpha-1(II) chain	COL2A1	1	Growth and maintenance	Extracellular
O94769	Extracellular matrix protein 2	ECM2	3	Growth and maintenance	Extracellular
Q06828	Fibromodulin	FMOD	2	Growth and maintenance	Extracellular
P35579	Cluster of Myosin-9	MYH9	0	Growth and maintenance	Cytoplasm
Q9Y5H1	Protocadherin gamma-A2	PCDHGA2	1	Growth and maintenance	Integral to membrane
A8K2U0	Alpha-2-macroglobulin-like protein 1	A2ML1	2	Immune response	Cytoplasmic vesicle
O95867	Lymphocyte antigen 6 complex locus protein G6c	LY6G6C	1	Immune response	Plasma membrane
P00738	Haptoglobin	HP	5	Immune response	Extracellular
P01591	Immunoglobulin J chain	IGJ	1	Immune response	Endoplasmic reticulum
P01833	Polymeric immunoglobulin receptor	PIGR	1	Immune response	Plasma membrane
P01834	Ig kappa chain C region	IGKC	6	Immune response	Cytoplasm
P01857	Ig gamma-1 chain C region	IGHG1	10	Immune response	Ribosome
P01859	Ig gamma-2 chain C region	IGHG2	9	Immune response	Ribosome
P01860	Ig gamma-3 chain C region	IGHG3	9	Immune response	Ribosome
P01861	Ig gamma-4 chain C region	IGHG4	8	Immune response	Ribosome
P01876;P01877	Immunoglobulin heavy constant alpha 1; Immunoglobulin heavy constant alpha 2	IGHA1;IGHA2	8	Immune response	Ribosome
P02748	Complement component C9	C9	9	Immune response	Extracellular
P02760	Protein AMBP	AMBP	1	Immune response	Extracellular
P02763	Alpha-1-acid glycoprotein 1	ORM1	3	Immune response	Extracellular
P0CG06;P0CG05;P0CF74;P0CG04;A0M8Q6;B9A064	Ig lambda-3 chain C regions; Ig lambda-2 chain C regions; Ig lambda-6 chain C region; Ig lambda-1 chain C regions; Ig lambda-7 chain C region; Immunoglobulin lambda-like polypeptide 5	IGLC3;IGLC2;IGLC6;IGLC1;IGLC7;IGLL5	4	Immune response	Nucleus

P10909	Clusterin	CLU	9	Immune response	Extracellular
P19876	C-X-C motif chemokine 3	CXCL3	1	Immune response	unknown
P20160	Azurocidin	AZU1	1	Immune response	Cytoplasmic vesicle
P25311	Zinc-alpha-2-glycoprotein	AZGP1	13	Immune response	Extracellular
P59666;P59665	Neutrophil defensin 3; Neutrophil defensin 1	DEFA3;DEFA1	2	Immune response	Extracellular
P61769	Beta-2-microglobulin	B2M	1	Immune response	Extracellular
Q5VU13	V-set and immunoglobulin domain-containing protein 8	VSIG8	2	Immune response	Integral to membrane
Q8ND90	Paraneoplastic antigen Ma1	PNMA1	1	Immune response	Cytoplasm
Q9H1E1	Ribonuclease 7	RNASE7	3	Immune response	Extracellular
Q9NZH6	Interleukin-37	IL37	1	Immune response	Secretory granule
Q9UGM3	Deleted in malignant brain tumors 1 protein	DMBT1	1	Immune response	Plasma membrane
Q9UHF4	Interleukin-20 receptor subunit alpha	IL20RA	1	Immune response	Plasma membrane
P02741	C-reactive protein	CRP	2	Immune response	Extracellular
P01024	Complement C3	C3	2	Immune response	Extracellular
P09382	Galectin-1	LGALS1	2	Immune response	Nucleus
P15516	Histatin-3	HTN3	2	Immune response	Extracellular
P25311	Zinc-alpha-2-glycoprotein	AZGP1	15	Immune response	Extracellular
P07477	Trypsin-1	PRSS1	1	Metabolism	Cytoplasm
O14818;Q8TAA3	Proteasome subunit alpha type-7;Proteasome subunit alpha type-7-like	PSMA7;PSMA8	3	Metabolism	Cytoplasm
O43278	Kunitz-type protease inhibitor 1	SPINT1	1	Metabolism	Soluble fraction
O43548	Protein-glutamine gamma-glutamyltransferase 5	TGM5	1	Metabolism	Cytoplasm
O60315	Zinc finger E-box-binding homeobox 2	ZEB2	1	Metabolism	Nucleus
Q9HAW9;Q9HAW8;Q9HAW7;O60656;P19224;P22309;P35504;P35503;P22310	UDP-glucuronosyltransferase 1-8; UDP-glucuronosyltransferase 1-10; UDP-glucuronosyltransferase 1-7; UDP-glucuronosyltransferase 1-9; UDP-glucuronosyltransferase 1-6; UDP-glucuronosyltransferase 1-1; UDP-glucuronosyltransferase 1-5; UDP-glucuronosyltransferase 1-3; UDP-glucuronosyltransferase 1-4	UGT1A8;UGT1A10;UGT1A7;UGT1A9;UGT1A6;UGT1A1;UGT1A5;UGT1A3;UGT1A4	1	Metabolism	Endoplasmic reticulum
Q99880;Q99879;Q99877	Histone H2B type 1-L; Histone H2B type 1-M;	HIST1H2BL;HIS	4	Metabolism	Nucleus



;Q93079;Q5QNW6;P62807;P58876;P57053;O60814;Q16778;P33778;P23527;P06899;Q8N257;Q96A08	Histone H2B type 1-N; Histone H2B type 1-H; Histone H2B type 2-F; Histone H2B type 1-C/E/F/G/I; Histone H2B type 1-D; Histone H2B type F-S; Histone H2B type 1-K; Histone H2B type 2-E; Histone H2B type 1-B; Histone H2B type 1-O; Histone H2B type 1-J; Histone H2B type 3-B; Histone H2B type 1-A	T1H2BM;HIST1H2BN;HIST1H2BH;HIST2H2BF;HIST1H2BC;HIST1H2BD;H2BFS;HIST1H2BK;HIST2H2BE;HIST1H2BB;HIST1H2BO;HIST1H2BJ;HIST3H2BB;HIST1H2BA			
O60882	Matrix metalloproteinase-20	MMP20	12	Metabolism	Extracellular
O75132	Zinc finger BED domain-containing protein 4	ZBED4	1	Metabolism	Nucleus
O75342	Arachidonate 12-lipoxygenase, 12R-type	ALOX12B	2	Metabolism	Cytoplasm
O75881	25-hydroxycholesterol 7-alpha-hydroxylase	CYP7B1	1	Metabolism	Endoplasmic reticulum
Q9HC52;O95503	Chromobox protein homolog 8; Chromobox protein homolog 6	CBX8;CBX6	1	Metabolism	Nucleus
P00558;P07205	Phosphoglycerate kinase 1; Phosphoglycerate kinase 2	PGK1;PGK2	2	Metabolism	Cytoplasmic vesicle
P00734	Prothrombin	F2	31	Metabolism	Extracellular
P00740	Coagulation factor IX	F9	7	Metabolism	Extracellular
P00742	Coagulation factor X	F10	11	Metabolism	Extracellular
P01008	Antithrombin-III	SERPINC1	11	Metabolism	Extracellular
P01009	Alpha-1-antitrypsin	SERPINA1	9	Metabolism	Extracellular
P01023	Alpha-2-macroglobulin	A2M	2	Metabolism	Extracellular
P01036	Cystatin-S	CST4	5	Metabolism	Cytoplasm
P01037	Cystatin-SN	CST1	3	Metabolism	Cytoplasm
P01040	Cystatin-A	CSTA	7	Metabolism	Cytoplasm
P01042	Kininogen-1	KNG1	11	Metabolism	Extracellular
P02743	Serum amyloid P-component	APCS	2	Metabolism	Extracellular
P03950	Angiogenin	ANG	1	Metabolism	Extracellular
P04070	Vitamin K-dependent protein C	PROC	4	Metabolism	unknown
P04406	Glyceraldehyde-3-phosphate dehydrogenase	GAPDH	14	Metabolism	Cell projection

P19961	Alpha-amylase 2B	AMY2B;AMY2A;AMY1A	3	Metabolism	Extracellular
P04792	Heat shock protein beta-1	HSPB1	2	Metabolism	Cytoplasm
Q93077;Q7L7L0;P04908;Q71UI9;P0C0S5;Q96QV6;P16104	Histone H2A type 1-C; Histone H2A type 3; Histone H2A type 1-B/E; Histone H2A.V; Histone H2A.Z; Histone H2A type 1-A; Histone H2AX	HIST1H2AC;HIST3H2A;HIST1H2AB;H2AFV;H2AFZ;HIST1H2AA;H2AFX	4	Metabolism	Nucleus
P05089	Arginase-1	ARG1	16	Metabolism	Cytoplasm
P05164	Myeloperoxidase	MPO	9	Metabolism	Extracellular
P05386	60S acidic ribosomal protein P1	RPLP1	2	Metabolism	Ribosome
P05387	60S acidic ribosomal protein P2	RPLP2	1	Metabolism	Cytoplasm
P06733	Alpha-enolase	ENO1	14	Metabolism	Cytoplasm
P07225	Vitamin K-dependent protein S	PROS1	2	Metabolism	Extracellular
P07237	Protein disulfide-isomerase	P4HB	2	Metabolism	Endoplasmic reticulum
P07339	Cathepsin D	CTSD	5	Metabolism	Extracellular
P07384	Calpain-1 catalytic subunit	CAPN1	2	Metabolism	Cytoplasm
P07998	Ribonuclease pancreatic	RNASE1	2	Metabolism	Extracellular
P08246	Neutrophil elastase	ELANE	1	Metabolism	Cytoplasm
P08294	Extracellular superoxide dismutase [Cu-Zn]	SOD3	3	Metabolism	Extracellular
P09211	Glutathione S-transferase P	GSTP1	1	Metabolism	Cytoplasm
Q99878;Q96KK5;Q9BTM1;Q16777;Q6FI13;P20671;P0C0S8	Histone H2A type 1-J; Histone H2A type 1-H; Histone H2A.J; Histone H2A type 2-C; Histone H2A type 2-A; Histone H2A type 1-D; Histone H2A type 1	HIST1H2AJ;HIST1H2AH;H2AFJ;HIST2H2AC;HIST2H2AA3;HIST1H2AD;HIST1H2AG	5	Metabolism	Nucleus
P62987;P62979;P0CG47;P0CG48	Ubiquitin-60S ribosomal protein L40; Ubiquitin-40S ribosomal protein S27A; Polyubiquitin-B; Polyubiquitin-C	UBA52;RPS27A;UBB;UBC	5	Metabolism	Ribosome
P16403;P10412;P16402	Histone H1.2; Histone H1.4; Histone H1.3	HIST1H1C;HIST1H1E;HIST1H1	3	Metabolism	Nucleus

		D			
P10599	Thioredoxin	TXN	6	Metabolism	Cytoplasm
P11021	78 kDa glucose-regulated protein	HSPA5	2	Metabolism	Endoplasmic reticulum
P11142;P54652	Heat shock cognate 71 kDa protein; Heat shock-related 70 kDa protein 2	HSPA8;HSPA2	4	Metabolism	Cytoplasm
P12724	Eosinophil cationic protein	RNASE3	1	Metabolism	Cytoplasm
P12955	Xaa-Pro dipeptidase	PEPD	1	Metabolism	Cytoplasm
P13639	Elongation factor 2	EEF2	8	Metabolism	Cytoplasm
P14618	Pyruvate kinase PKM	PKM	1	Metabolism	Cytoplasm
P14625	Endoplasmin	HSP90B1	3	Metabolism	Endoplasmic reticulum
P22735	Protein-glutamine gamma-glutamyltransferase K	TGM1	9	Metabolism	Cytoplasm
P22891	Vitamin K-dependent protein Z	PROZ	2	Metabolism	Endoplasmic reticulum
P23284	Peptidyl-prolyl cis-trans isomerase B	PPIB	2	Metabolism	Endoplasmic reticulum
P25705	ATP synthase subunit alpha, mitochondrial	ATP5A1	2	Metabolism	Mitochondrion
P25789	Proteasome subunit alpha type-4	PSMA4	2	Metabolism	Cytoplasm
P25791	Rhombotin-2	LMO2	1	Metabolism	Nucleus
P27797	Calreticulin	CALR	4	Metabolism	Endoplasmic reticulum
P28838	Cytosol aminopeptidase	LAP3	1	Metabolism	Cytoplasm
P29508	Serpin B3	SERPINB3	2	Metabolism	Cytoplasm
P30876	DNA-directed RNA polymerase II subunit RPB2	POLR2B	1	Metabolism	Nucleus
P31944	Caspase-14	CASP14	17	Metabolism	Cytoplasm
P32119	Peroxisome oxidoreductin-2	PRDX2	7	Metabolism	Cytoplasm
P33260	Cytochrome P450 2C18	CYP2C18	1	Metabolism	Endoplasmic reticulum
P35573	Glycogen debranching enzyme	AGL	1	Metabolism	Cytoplasm
P35754	Glutaredoxin-1	GLRX	2	Metabolism	Cytoplasm
P37837	Transaldolase	TALDO1	1	Metabolism	Nucleus
P38646	Stress-70 protein, mitochondrial	HSPA9	1	Metabolism	Cytoplasm
P40394	Alcohol dehydrogenase class 4 mu/sigma chain	ADH7	1	Metabolism	Cytoplasm



P40926	Malate dehydrogenase, mitochondrial	MDH2	1	Metabolism	Mitochondrion
P42357	Histidine ammonia-lyase	HAL	8	Metabolism	Cytoplasm
P46976	Glycogenin-1	GYG1	1	Metabolism	Integral to membrane
P48163	NADP-dependent malic enzyme	LGALS7	1	Metabolism	Cytoplasm
P48637	Glutathione synthetase	GSS	1	Metabolism	Nucleus
P49720	Proteasome subunit beta type-3	PSMB3	1	Metabolism	Nucleus
P50454	Serpin H1	SERPINH1	2	Metabolism	Endoplasmic reticulum
P50914	60S ribosomal protein L14	RPL14	1	Metabolism	Ribosome
P55786	Puromycin-sensitive aminopeptidase	NPEPPS	2	Metabolism	Cytoplasm
P55895	V(D)J recombination-activating protein 2	RAG2	1	Metabolism	Nucleus
P60174	Triosephosphate isomerase	TPI1	9	Metabolism	Cytoplasm
P61371	Insulin gene enhancer protein ISL-1	ISL1	1	Metabolism	Nucleus
P61626	Lysozyme C	LYZ	4	Metabolism	Cytoplasm
Q5VTE0;P68104;Q05639	Putative elongation factor 1-alpha-like 3; Elongation factor 1-alpha 1; Elongation factor 1-alpha 2	EEF1A1P5;EEF1A1;EEF1A2	7	Metabolism	Cytoplasm
P68431;Q6NXT2;Q71DI3;Q16695;P84243	Histone H3.1; Histone H3.3C; Histone H3.2; Histone H3.1t; Histone H3.3	HIST1H3A;H3F3C;HIST2H3A;HIST3H3;H3F3A	3	Metabolism	Nucleus
Q06830	Peroxiredoxin-1	PRDX1	4	Metabolism	Cytoplasm
Q10586	D site-binding protein	DBP	1	Metabolism	Nucleus
Q13103	Secreted phosphoprotein 24	SPP2	2	Metabolism	Extracellular
Q13217	DnaJ homolog subfamily C member 3	DNAJC3	1	Metabolism	Golgi apparatus
Q13228	Selenium-binding protein 1	SELENBP1	3	Metabolism	Cytoplasm
Q13510	Acid ceramidase	ASAH1	3	Metabolism	Lysosome
Q13867	Bleomycin hydrolase	BLMH	14	Metabolism	Cytoplasm
Q14929	Zinc finger protein 169	ZNF169	1	Metabolism	Nucleus
Q14966	Zinc finger protein 638	ZNF638	1	Metabolism	Nucleus
Q15431	Synaptonemal complex protein 1	SYCP1	1	Metabolism	Nucleus
Q15828	Cystatin-M	CST6	4	Metabolism	Extracellular
Q53RT3	Retroviral-like aspartic protease 1	ASPRV1	2	Metabolism	Nucleus
Q6NUI2	Glycerol-3-phosphate acyltransferase 2, mitochondrial	GPAT2	1	Metabolism	Endoplasmic reticulum
Q76LX8	A disintegrin and metalloproteinase with	ADAMTS13	1	Metabolism	unknown

	thrombospondin motifs 13				
Q86V15	Zinc finger protein castor homolog 1	CASZ1	1	Metabolism	Cytoplasm
Q8IW75	Serpin A12	SERPINA12	3	Metabolism	Endoplasmic reticulum
Q8NAP8	Zinc finger and BTB domain-containing protein 8B	ZBTB8B	1	Metabolism	unknown
Q8NBB4	Zinc finger and SCAN domain-containing protein 1	ZSCAN1	1	Metabolism	Nucleus
Q8NEM8	Cytosolic carboxypeptidase 3	AGBL3	1	Metabolism	Nucleus
Q96IZ0	PRKC apoptosis WT1 regulator protein	PAWR	1	Metabolism	Nucleus
Q96K21	Abscission/NoCut checkpoint regulator	ZFYVE19	1	Metabolism	Cytoplasm
Q96P63	Serpin B12	SERPINB12	5	Metabolism	Cytoplasm
Q99460	26S proteasome non-ATPase regulatory subunit 1	PSMD1	1	Metabolism	Cytoplasm
Q99518	Dimethylaniline monooxygenase [N-oxide-forming] 2	FMO2	1	Metabolism	Endoplasmic reticulum
Q9BS26	Endoplasmic reticulum resident protein 44	ERP44	1	Metabolism	Endoplasmic reticulum
Q9H7L9	Sin3 histone deacetylase corepressor complex component SDS3	SUDS3	1	Metabolism	Nucleus
Q9NRA8	Eukaryotic translation initiation factor 4E transporter	EIF4ENIF1	1	Metabolism	Perinuclear region
Q9NVC6	Mediator of RNA polymerase II transcription subunit 17	MED17	1	Metabolism	Nucleus
Q9NXX8	F-box/LRR-repeat protein 12	FBXL12	1	Metabolism	Nucleus
Q9UI42	Carboxypeptidase A4	CPA4	5	Metabolism	Peroxisome
Q9UK55	Protein Z-dependent protease inhibitor	SERPINA10	3	Metabolism	unknown
Q9UQ49	Sialidase-3	NEU3	1	Metabolism	Plasma membrane
Q9Y337	Kallikrein-5	KLK5	3	Metabolism	unknown
Q9Y3A2	Probable U3 small nucleolar RNA-associated protein 11	UTP11L	1	Metabolism	Nucleolus
Q9Y3C7	Mediator of RNA polymerase II transcription subunit 31	MED31	1	Metabolism	Nucleus
Q9Y3S1	Serine/threonine-protein kinase WNK2	WNK2	1	Metabolism	Nucleus
Q9Y5K8	V-type proton ATPase subunit D	ATP6V1D	1	Metabolism	Integral to membrane
P06576	ATP synthase subunit beta, mitochondrial	ATP5B	3	Metabolism	Mitochondrion
P08709	Coagulation factor VII	F7	2	Metabolism	Extracellular

P09228	Cluster of Cystatin-SA	CST2	2	Metabolism	Cytoplasm
P17931	Galectin-3	LGALS3	3	Metabolism	Cytoplasm
Q92820	Gamma-glutamyl hydrolase	GGH	4	Metabolism	Lysosome
P07195	L-lactate dehydrogenase B chain	LDHB	2	Metabolism	Cytoplasm
P60900	Proteasome subunit alpha type-6	PSMA6	2	Metabolism	Cytoplasm
Q99497	Protein deglycase DJ-1	PARK7	2	Metabolism	Cytoplasm
P30101	Protein disulfide-isomerase A3	PDIA3	2	Metabolism	Endoplasmic reticulum
O00472	RNA polymerase II elongation factor ELL2	ELL2	2	Metabolism	Nucleus
Q15149	Cluster of Plectin	PLEC	2	other	Cytoplasm
O14683	Tumor protein p53-inducible protein 11	TP53I11	1	others	Cytoplasm
P04196	Histidine-rich glycoprotein	HRG	5	others	Extracellular
P49862	Kallikrein-7	KLK7	6	others	Extracellular
P62937;Q9Y536	Peptidyl-prolyl cis-trans isomerase A; Peptidyl-prolyl cis-trans isomerase A-like 4A	PPIA;PPIAL4A	2	others	Cytoplasm
Q13835	Plakophilin-1	PKP1	9	others	Nucleus
Q15398	Disks large-associated protein 5	DLGAP5	1	others	Centrosome
Q1MSJ5	Centrosome and spindle pole-associated protein 1	CSPP1	1	others	Centrosome
Q5JSS6	Meiosis expressed gene 1 protein homolog	MEIG1	1	others	Nucleus
Q7Z4I7	LIM and senescent cell antigen-like-containing domain protein 2	LIMS2	1	others	Nucleus
Q8IWX8	Calcium homeostasis endoplasmic reticulum protein	CHERP	1	others	Endoplasmic reticulum
Q96FX8	p53 apoptosis effector related to PMP-22	PERP	1	others	Plasma membrane
Q9UI95	Mitotic spindle assembly checkpoint protein MAD2B	MAD2L2	1	others	Nucleus
Q6E0U4	Dermokine	DMKN	1	Signal transduction	unknown
P02768	Serum albumin	ALB	63	Signal transduction	Extracellular
P20930	Filaggrin	FLG	11	Signal transduction	Extracellular
Q5D862	Filaggrin-2	FLG2	18	Signal transduction	unknown
O75145	Liprin-alpha-3	PPFIA3	1	Signal transduction	Plasma membrane
O75469	Nuclear receptor subfamily 1 group I member 2	NR1I2	1	Signal transduction	Nucleus
O95147	Dual specificity protein phosphatase 14	DUSP14	3	Signal transduction	Cytoplasm

P01137	Transforming growth factor beta-1;Latency-associated peptide	TGFB1	5	Signal transduction	Nucleus
P01344	Insulin-like growth factor II	IGF2	2	Signal transduction	Extracellular
P02765	Alpha-2-HS-glycoprotein	AHSG	17	Signal transduction	Extracellular
P05067	Amyloid beta A4 protein	APP	10	Signal transduction	Endoplasmic reticulum
P05109	Protein S100-A8	S100A8	5	Signal transduction	Cytoplasm
P06702	Protein S100-A9	S100A9	8	Signal transduction	Cytoplasm
P07355;A6NMY6	Annexin A2; Putative annexin A2-like protein	ANXA2;ANXA2 P2	14	Signal transduction	Cytoplasm
P08238;P07900;Q14568;Q58FF8	Heat shock protein HSP 90-beta; Heat shock protein HSP 90-alpha; Heat shock protein HSP 90-alpha A2; Putative heat shock protein HSP 90-beta 2	HSP90AB1;HSP90AA1;HSP90A A2P;HSP90AB2 P	2	Signal transduction	Cytoplasm
P10745	Retinol-binding protein 3	RBP3	1	Signal transduction	Extracellular
P11362	Fibroblast growth factor receptor 1	FGFR1	2	Signal transduction	Plasma membrane
P12270	Nucleoprotein TPR	TPR	1	Signal transduction	Endoplasmic reticulum
P12273	Prolactin-inducible protein	PIP	5	Signal transduction	Peroxisome
P12757	Ski-like protein	SKIL	1	Signal transduction	Nucleus
P14923	Junction plakoglobin	JUP	33	Signal transduction	Cytoplasm
P17936	Insulin-like growth factor-binding protein 3	IGFBP3	2	Signal transduction	Extracellular
P20702	Integrin alpha-X	ITGAX	1	Signal transduction	Plasma membrane
P21246	Pleiotrophin	PTN	4	Signal transduction	Extracellular
P21741	Midkine	MDK	1	Signal transduction	Extracellular
P24593	Insulin-like growth factor-binding protein 5	IGFBP5	3	Signal transduction	Extracellular
P24821	Tenascin	TNC	1	Signal transduction	Extracellular
P30086	Phosphatidylethanolamine-binding protein 1	PEBP1	3	Signal transduction	Cytoplasm
P31151	Protein S100-A7	S100A7	5	Signal transduction	Cytoplasm
P32455	Interferon-induced guanylate-binding protein 1	GBP1	1	Signal transduction	Cytoplasm
P33764	Protein S100-A3	S100A3	2	Signal transduction	Cytoplasm
P36955	Pigment epithelium-derived factor	SERPINF1	15	Signal transduction	Extracellular
P47736	Rap1 GTPase-activating protein 1	RAP1GAP	1	Signal transduction	Cytoplasm
P55008	Allograft inflammatory factor 1	AIF1	1	Signal transduction	Nucleus

P61812	Transforming growth factor beta-2 proprotein	TGFB2	3	Signal transduction	Extracellular
P62158	Calmodulin	CALM1	1	Signal transduction	Cytoplasm
P80303	Nucleobindin-2	NUCB2	1	Signal transduction	Golgi apparatus
P81605	Dermcidin	DCD	5	Signal transduction	Plasma membrane
Q02818	Nucleobindin-1	NUCB1	1	Signal transduction	Extracellular
Q07283	Trichohyalin	TCHH	1	Signal transduction	Nucleus
Q08188	Protein-glutamine gamma-glutamyltransferase E	TGM3	15	Signal transduction	Cytoplasm
Q12955	Ankyrin-3	ANK3	1	Signal transduction	Plasma membrane
Q13576	Ras GTPase-activating-like protein IQGAP2	IQGAP2	1	Signal transduction	Cytoplasm
Q15063	Periostin	POSTN	2	Signal transduction	Plasma membrane
Q15582	Transforming growth factor-beta-induced protein ig-h3	TGFBI	2	Signal transduction	Extracellular
Q6UWE0	E3 ubiquitin-protein ligase LRSAM1	LRSAM1	1	Signal transduction	Cytoplasm
Q6VN20;Q96S59	Ran-binding protein 10; Ran-binding protein 9	RANBP10;RANBP9	1	Signal transduction	Cytoplasm
Q86SJ6	Desmoglein-4	DSG4	2	Signal transduction	Plasma membrane
Q8N4B1	Sesquipedalian-1	FAM109A	1	Signal transduction	Nucleus
Q8NGZ2	Olfactory receptor 14K1	OR14K1	1	Signal transduction	Plasma membrane
Q8TF66	Leucine-rich repeat-containing protein 15	LRRC15	5	Signal transduction	Plasma membrane
Q8WYP3	Ras and Rab interactor 2	RIN2	1	Signal transduction	Plasma membrane
Q969S3	Zinc finger protein 622	ZNF622	1	Signal transduction	Nucleus
Q96FQ6	Protein S100-A16	S100A16	1	Signal transduction	Nucleolus
Q96Q27	Ankyrin repeat and SOCS box protein 2	ASB2	1	Signal transduction	Cytoplasm
Q96QC0	Serine/threonine-protein phosphatase 1 regulatory subunit 10	PPP1R10	1	Signal transduction	Nucleus
Q99969	Retinoic acid receptor responder protein 2	RARRES2	1	Signal transduction	Plasma membrane
Q9BZE4	Nucleolar GTP-binding protein 1	GTPBP4	1	Signal transduction	Nucleus
Q9NZT1	Calmodulin-like protein 5	CALML5	9	Signal transduction	Extracellular
Q9Y240	C-type lectin domain family 11 member A	CLEC11A	5	Signal transduction	Extracellular
Q04917	14-3-3 protein eta	YWHAH	0	Signal transduction	Cytoplasm
P31947	14-3-3 protein sigma	SFN	2	Signal transduction	Cytoplasm
P21815	Bone sialoprotein 2	IBSP	2	Signal transduction	Extracellular



P23229	Integrin alpha-6	ITGA6	2	Signal transduction	Plasma membrane
A9QM74	Importin subunit alpha-8	KPNA7	1	transport	Nucleus
P02647	Apolipoprotein A-I	APOA1	1	transport	Extracellular
P02766	Transthyretin	TTR	1	transport	Extracellular
P02787	Serotransferrin	TF	33	transport	Endosome
P02788	Lactotransferrin	LTF	16	transport	Golgi apparatus
P02790	Hemopexin	HPX	2	transport	Extracellular
P08493	Matrix Gla protein	MGP	2	transport	Extracellular
P12104	Fatty acid-binding protein, intestinal	FABP2	1	transport	Cytoplasm
P20774	Mimectan	OGN	2	transport	Extracellular
P31025	Lipocalin-1	LCN1	3	transport	Plasma membrane
P50395;P31150	Rab GDP dissociation inhibitor beta; Rab GDP dissociation inhibitor alpha	GDI2;GDI1	4	transport	Cytoplasm
P51571	Translocon-associated protein subunit delta	SSR4	1	transport	Endoplasmic reticulum
P68871;P02042	Hemoglobin subunit beta; Hemoglobin subunit delta	HBB;HBD	8	transport	unknown
P69905	Hemoglobin subunit alpha	HBA1	5	transport	Endoplasmic reticulum
Q01469	Fatty acid-binding protein, epidermal	FABP5	10	transport	Cytoplasm
Q09666	Neuroblast differentiation-associated protein	AHNAK	3	transport	Nucleus
Q15785	Mitochondrial import receptor subunit TOM34	TOMM34	1	transport	Cytoplasm
Q86VX9	Vacuolar fusion protein MON1 homolog A	MON1A	1	transport	Nucleus
Q8N139	ATP-binding cassette sub-family A member 6	ABCA6	1	transport	Plasma membrane
Q8NBJ4	Golgi membrane protein 1	GOLM1	1	transport	Golgi apparatus
Q8WVM8	Sec1 family domain-containing protein 1	SCFD1	1	transport	Plasma membrane
Q9HB14	Potassium channel subfamily K member 13	KCNK13	1	transport	Plasma membrane
Q8WZ42	Titin	TTN	2	transport	Cytoplasm
P02774	Vitamin D-binding protein	GC	4	transport	Extracellular
A0A0C4DH25;P01619	Ig kappa chain V-III region B6	IGKV3D-20	1	unknown	unknown
A2A368	Melanoma-associated antigen B16	MAGEB16	1	unknown	unknown
A8MTJ3	Guanine nucleotide-binding protein G(t) subunit alpha-3	GNAT3	1	unknown	unknown

	Hornerin	HRNR	14	unknown	Plasma membrane
O15335	Chondroadherin	CHAD	4	unknown	Nucleus
O43147	Small G protein signaling modulator 2	SGSM2	1	unknown	Endosome
O75223	Gamma-glutamylcyclotransferase	GGCT	3	unknown	Mitochondrion
O95397	Putative protein PLEKHA9	PLEKHA8P1	1	unknown	unknown
P04040	Catalase	CAT	9	unknown	unknown
P05452	Tetranectin	CLEC3B	3	unknown	Extracellular
P14735	Insulin-degrading enzyme	IDE	1	unknown	unknown
P51884	Lumican	LUM	5	unknown	unknown
P55000	Secreted Ly-6/uPAR-related protein 1	SLURP1	1	unknown	unknown
P80748	Ig lambda chain V-III region LOI	IGLV3-21	1	unknown	unknown
Q14956	Transmembrane glycoprotein NMB	GPNMB	1	unknown	Plasma membrane
Q16560	U11/U12 small nuclear ribonucleoprotein 35 kDa protein	SNRNP35	1	unknown	Nucleolus
Q562R1	Beta-actin-like protein 2	ACTBL2	5	unknown	Nucleus
Q5T750	Skin-specific protein 32	XP32	6	unknown	unknown
Q5T9L3	Protein wntless homolog	WLS	1	unknown	unknown
Q6NUJ1	Proactivator polypeptide-like 1	PSAPL1	1	unknown	Plasma membrane
Q6UWP8	Suprabasin	SBSN	15	unknown	unknown
Q6UWY5	Olfactomedin-like protein 1	OLFML1	2	unknown	Nucleus
Q6ZV89	SH2 domain-containing protein 5	SH2D5	1	unknown	Nucleus
Q6ZVX7	F-box only protein 50	NCCRP1	5	unknown	unknown
Q7RTV5	Thioredoxin-like protein AAED1	AAED1	1	unknown	unknown
Q7Z5P9	Mucin-19	MUC19	1	unknown	Nucleus
Q8N129	Protein canopy homolog 4	CNPY4	1	unknown	Cytoplasm
Q8N326	Uncharacterized protein C10orf111	C10orf111	1	unknown	Nucleolus
Q8N7J2	APC membrane recruitment protein 2	AMER2	1	unknown	unknown
Q8TEH3	DENN domain-containing protein 1A	DENND1A	1	unknown	unknown
Q8WTQ4	Uncharacterized protein C16orf78	C16orf78	1	unknown	Lysosome
Q8WVV4	Protein POF1B	POF1B	10	unknown	unknown
Q8WWR9	Pancreatic progenitor cell differentiation and proliferation factor-like protein	PPDPFL	1	unknown	unknown
Q96HP4	Oxidoreductase NAD-binding domain-containing protein 1	OXNAD1	1	unknown	Integral to membrane

Q96QA5	Gasdermin-A	GSDMA	8	unknown	unknown
Q9BVA6	Adenosine monophosphate-protein transferase FICD	FICD	1	unknown	Integral to membrane
Q9BYL1	Sterile alpha motif domain-containing protein 10	SAMD10	1	unknown	Cytosol
Q9H425	Uncharacterized protein C1orf198	C1orf198	1	unknown	Peroxisome
Q9NU19	TBC1 domain family member 22B	TBC1D22B	1	unknown	Nucleus
Q9NV64	Transmembrane protein 39A	TMEM39A	1	unknown	Integral to membrane
Q9NZ09	Ubiquitin-associated protein 1	UBAP1	1	unknown	Nucleolus
Q9P278	Folliculin-interacting protein 2	FNIP2	1	unknown	Endosome
Q9UD57	NK1 transcription factor-related protein 2	NKX1-2	1	unknown	unknown
Q9Y577	E3 ubiquitin-protein ligase TRIM17	TRIM17	1	unknown	Plasma membrane
O60911	Cathepsin L2	CTSV	3	unknown	unknown
Q8TF61	F-box only protein 41	FBXO41	2	unknown	Cytoplasm
Q3ZCW2	Galectin-related protein	LGALSL	2	unknown	unknown
Q9BZ95	Histone-lysine N-methyltransferase NSD3	NSD3	2	unknown	unknown
Q5VST9	Obscurin	OBSCN	2	unknown	unknown
Q9HCY8	Protein S100-A14	S100A14	3	unknown	Cytoplasm
O94759	Transient receptor potential cation channel subfamily M member 2	TRPM2	1	unknown	Plasma membrane
P84550	SKI family transcriptional corepressor 1	SKOR1	1	unknown	Unknown
Q107X0	Putative protein KRIP1	KLKP1	1	unknown	unknown
P00533	Epidermal growth factor receptor	EGFR	1	Cell communication	Plasma membrane
P11766	Alcohol dehydrogenase class-3	ADH5	1	Metabolism	Cytoplasm
Q6P3W7	SCY1-like protein 2	SCYL2	1	Regulation of endocytosis	Cytoplasm
Q6ZQN7	Solute carrier organic anion transporter family member 4C1	SLCO4C1	1	Transport	Plasma membrane
Q8NAB2	Kelch repeat and BTB domain-containing protein 3	KBTBD3	1	unknown	unknown
Q5SZL2	Centrosomal protein of 85 kDa-like	CEP85L	2	unknown	Cytoskeleton

