

Supplementary Data

Table S1. UniProt entry IDs for the protein sequences.

Proteins	Human (<i>Homo sapiens</i>)	Pig (<i>Sus scrofa</i>)
COL1A1	P02452	A0A8D1Z2N0
COL1A2	P08123	A0A8W4FM91
COL5A1	P20908	F1S021
COL5A2	P05997	Q59IP2
COL6A1	P12109	I3LS72
COL6A2	P12110	I3LQ84
COL6A3	P12111	A0A8D0XUY7
Keratocan	O60938	F1SQ08
Decorin	P07585	Q9XSD9
Lumican	P51884	F1SQ09
Biglycan	P21810	Q9GKQ6
Fibronectin	P02751	A0A8D1ET23
Laminin	P25391	A0A287AG36
Fibrillin	P35555	Q9TV36

KEGG Pathways				
pathway	description	count in network	strength	false discovery rate
hsa05330	Allograft rejection	9 of 34	2.21	4.11e-15
hsa05332	Graft-versus-host disease	9 of 36	2.19	4.11e-15
hsa04940	Type I diabetes mellitus	9 of 38	2.16	4.11e-15
hsa05320	Autoimmune thyroid disease	8 of 48	2.01	1.40e-12
hsa05144	Malaria	7 of 46	1.97	1.03e-10
hsa04672	Intestinal immune network for IgA production	6 of 43	1.93	4.95e-09
hsa05143	African trypanosomiasis	5 of 36	1.93	1.30e-07
hsa05323	Rheumatoid arthritis	10 of 83	1.87	1.64e-14
hsa05321	Inflammatory bowel disease	7 of 59	1.86	3.97e-10
hsa05310	Asthma	3 of 27	1.84	0.00014
hsa05140	Leishmaniasis	6 of 69	1.73	5.33e-08
hsa05142	Chagas disease	8 of 97	1.71	1.95e-10
hsa05340	Primary immunodeficiency	3 of 37	1.7	0.00027
hsa04612	Antigen processing and presentation	5 of 64	1.68	1.42e-06
hsa05416	Viral myocarditis	4 of 55	1.65	2.48e-05
hsa04660	T cell receptor signaling pathway	7 of 100	1.63	1.04e-08
hsa01523	Antifolate resistance	2 of 31	1.6	0.0074
hsa05322	Systemic lupus erythematosus	6 of 94	1.59	2.34e-07
hsa04620	Toll-like receptor signaling pathway	6 of 100	1.57	3.15e-07
hsa04640	Hematopoietic cell lineage	5 of 90	1.53	6.17e-06
hsa05133	Pertussis	4 of 73	1.53	6.81e-05
hsa04933	AGE-RAGE signaling pathway in diabetic complications	5 of 96	1.51	8.03e-06
hsa04061	Viral protein interaction with cytokine and cytokine receptor	5 of 96	1.51	8.03e-06
hsa04514	Cell adhesion molecules	7 of 138	1.49	6.93e-08
hsa04659	Th17 cell differentiation	5 of 99	1.49	8.58e-06
hsa05146	Amoebiasis	5 of 101	1.48	9.09e-06
hsa05145	Toxoplasmosis	5 of 103	1.48	9.61e-06
hsa05135	Yersinia infection	6 of 124	1.47	1.01e-06
hsa04350	TGF-beta signaling pathway	4 of 91	1.43	0.00014
hsa04060	Cytokine-cytokine receptor interaction	12 of 282	1.42	1.11e-12
hsa05164	Influenza A	7 of 163	1.42	1.84e-07
hsa04650	Natural killer cell mediated cytotoxicity	5 of 120	1.41	1.79e-05
hsa04380	Osteoclast differentiation	5 of 120	1.41	1.79e-05
hsa04217	Necroptosis	6 of 147	1.4	2.42e-06
hsa04625	C-type lectin receptor signaling pathway	4 of 101	1.39	0.00019
hsa05152	Tuberculosis	6 of 165	1.35	4.46e-06
hsa04668	TNF signaling pathway	4 of 111	1.35	0.00026
hsa05134	Legionellosis	2 of 55	1.35	0.0186
hsa04658	Th1 and Th2 cell differentiation	3 of 85	1.34	0.0024
hsa04932	Non-alcoholic fatty liver disease	5 of 146	1.32	4.14e-05
hsa04657	IL-17 signaling pathway	3 of 91	1.31	0.0029
hsa04623	Cytosolic DNA-sensing pathway	2 of 62	1.3	0.0228

Figure S1. KEGG pathways for corneal graft rejection from STRING database.