

Supplemental table 1. Proteins identified on WGA-beads after incubation with apical RPE.

Proteins	Accession Number <sup>a</sup>	Peptide Matches	Experiment <sup>b</sup>		
			1	2	3
0 day neonate head cDNA, RIKEN full-length enriched library, clone:4833436C19	Q9D2K8	4	+		+
13 days embryo liver cDNA, RIKEN full-length enriched library, clone:2510040P05	Q9CY06	5		+	
14-3-3 protein epsilon, renal	<i>S31975</i>	2	+		
22 kDa neuronal tissue-enriched acidic protein	Q91XV3	3		+	
6-phosphofructokinase	<i>KIHUFM</i>	2		+	
78 kDa glucose-regulated protein	P11021	1		+	
9-cis retinol dehydrogenase	O55240	3	+	+	+
Actin, cytoplasmic 1-Beta actin	P60710	11	+		+
Actin, gamma	Q9QZ83	19	+	+	+
ADP,ATP carrier protein	Q09073	1			+
Agglutinin isolectin 1	<i>IWGCA</i>	4	+	+	+
Agglutinin isolectin 2	<i>2WGCA</i>	7	+	+	+
Agglutinin isolectin 3	<i>IWGTA</i>	7	+		
Alpha enolase	P17182	5	+	+	+
Alpha-1-antiproteinase	P34955	3	+		
Alpha-2-HS-glycoprotein	P12763	3	+		
Alpha-2-macroglobulin	<i>MAHU</i>	2	+		
Alpha-amylase inhibitor	P01085	3	+	+	+
Alpha-amylase/trypsin inhibitor CM3	P17314	3		+	+
Alpha-S1 casein	P02662	2	+		+
Annexin A2	P07356	2	+		
Annexin A5	P48036	3	+		
Basigin	P18572	6	+	+	+
Beta enolase	<i>P13929</i>	3	+	+	
Beta-hexosaminidase	Q04786	1	+		
Beta-lactoglobulin	<i>LGBO</i>	3	+		
Calgranulin A	<i>BCHUCF</i>	2			+
Carbonic anhydrase XIV	Q9WVT6	2		+	
Catalase precursor	Q59635	1			+
Cell septation protein	Q9RQ40	1		+	
Cellular retinaldehyde-binding protein (CRALBP)	Q9Z275	6	+	+	+
Chloride intracellular channel 6	Q96NY7	2	+	+	+
Circumsporozoite-protein related antigen	P04923	1	+		
Coenzyme PQQ synthesis protein B	Q88A81	1			+
Collagen alpha 1(XIV) chain	<i>S31212</i>	3		+	+
Collagen type XII alpha-1	<i>AAA99719</i>	37	+	+	+
Conserved protein	Q8Q0F8	1			+
Creatine kinase, B chain	P07335	1			+
Creatine kinase, M chain	P07310	3	+	+	
Cytokeratin 15	<i>I49595</i>	5	+	+	+
Decorin	P28654	4		+	+
Deoxyhemoglobin T38w, chain A	<i>IGLIA</i>	3		+	

Dermcidin	P81605	3	+		
Disease resistance response protein DRRG49-C	P27047	1	+		
DnaK-type molecular chaperone hsc70	JC5642	3			+
DnaK-type molecular chaperone hsp70	A48469	3	+		
eEF-1a	CAA40182	3	+	+	+
Elongation factor 1-alpha	P02993	4	+	+	
Elongation factor 1-alpha 2	Q05639	4		+	
Elongation factor 1-alpha-A	P50522	2			+
Enolase	P08734	6	+		+
Enolase-2	Q9PTX5	3	+	+	
ERM-binding phosphoprotein 50	Q9JJ19	1	+		
Ezrin	P31976	4		+	+
FdhD protein homolog	Q8NV95	1	+		
Fibrinogen alpha chain	FGRTA	1		+	
Fibromodulin	P50608	4		+	+
Fructose-bisphosphate aldolase A	P05064	4	+	+	+
Gamma2-globin	Q9GJY8	2		+	
Glial fibrillary acidic protein	P03995	1			+
Glucose transporter type 1 (Glut-1)	P17809	3	+	+	+
Glutathione S-transferase P	P04906	2		+	
Glutathione-disulfide reductase	RDECU	1	+	+	
Glutathione-S-transferase homolog	AAB70110	2	+		
Glyceraldehyde 3-phosphate dehydrogenase	P16858	8	+	+	+
Glycogen phosphorylase	Q9WUB3	5		+	+
Gp020L	Q9Q951	1	+		
Heat shock cognate 71 kDa protein	P11142	2	+	+	+
Heat shock cognate protein 70 kD mutant	IATR	3	+	+	+
Heat shock protein HSP 90-alpha	P46633	4	+		+
Heat shock protein HSP 90-beta	P08238	6		+	+
Heat shock protein Hsp70Bb	Q9BIS1	2			+
Heavy-chain binding protein BiP	AAB08760	2		+	
Hemoglobin alpha chains	HAMS	5		+	+
Hemoglobin beta-alpha mutant, chain A	1CH4A	2		+	
Hemoglobin beta-1 chain	P02088	9		+	+
Hemoglobin beta-2 chain	P02089	6		+	+
Hemopexin	AAH11246	2		+	
Heterokaryon incompatibility protein 6	Q9UV10	1	+		
Hsc70-interacting protein	Q99L47	2	+		
Hypothetical 29.8 kDa protein	Q8R1P3	2	+		+
Hypothetical metalloprotease HI0409	P44693	1		+	
Hypothetical protein	Q96C67	5		+	+
Hypothetical protein C25G10.03	Q10424	1	+		
Hypothetical protein C44B11.3	T15271	3			+
Hypothetical protein ECU09_0250	Q8STX1	1			+
Hypothetical protein F26E4.8	T21415	2			+
Hypothetical protein KIAA1084	Q9UPR8	1		+	

Hypothetical protein MG125	P47371	1	+		
Hypothetical protein MJ1417.1	P81328	1	+		+
Hypothetical protein PFB0765w	<i>AAN37613</i>	1			+
Hypothetical protein PH0469	<i>G71158</i>	1			+
Hypothetical protein T25C8.2	<i>T25272</i>	8	+	+	+
Ig gamma-1 chain C region	P01857	2			+
Ig kappa chain C region	P01834	1			+
Interphotoreceptor binding protein	Q924J2	2			+
Interphotoreceptor retinoid-binding protein (IRBP)	P49194	5	+	+	+
keratin 13, type I cytoskeletal	<i>A55682</i>	2	+		
Keratin 2 epidermis	Q61869	3	+	+	+
Keratin 6 beta	Q9Z331	3			+
Keratin complex 2	Q9CV72	2		+	
Keratin, epidermal	<i>S07330</i>	2			+
Keratin, type I cytoskeletal 21	P25030	2	+		
Keratin, type I cytoskeletal VIB	P06394	7	+		+
Keratin, type II cytoskeletal 1	P04104	3	+	+	+
Keratin, type II cytoskeletal 5	P13647	2	+		+
Keratin, type II cytoskeletal 6	P50446	1		+	
Keratin, type II cytoskeletal 8	P11679	1	+	+	+
L-lactate dehydrogenase A chain	P06151	3		+	
LD04994p	Q8SXXN3	13			+
Lumican	P51885	9	+	+	+
Lysozyme mutant	<i>ILSM</i>	1	+	+	
Lysozyme C	P00702	1	+	+	
Malate dehydrogenase	P14152	2	+		+
MDH9	Q9FII4	1	+		
Melanocyte protein Pmel 17	Q60696	1		+	+
Membrane-associated adenylate kinase	Q9R0Y4	2		+	
Moesin	P26041	3	+	+	
Monocarboxylate transporter 1	<i>AAC13720</i>	3	+	+	+
Monoglyceride lipase	O35678	2		+	+
Muscle glycogen phosphorylase	<i>AAD30476</i>	8		+	+
Na,K-transporting ATPase alpha-1 chain	P06685	6	+	+	+
Na,K-transporting ATPase alpha-4 chain	Q13733	2	+		
Na,K-ATPase beta-1 chain	P14094	1			+
Neuroglycan C	Q9QY32	1		+	
Neuronal membrane glycoprotein M6-a	P51674	1			+
Nuclear matrix protein 1	Q94G01	1		+	+
Oracle 2 protein (Fragment)	Q9JKS3	2			+
Outer capsid protein VP5	P12436	1	+	+	+
Ovalbumin	P01012	4	+		
Peptidyl-prolyl cis-trans isomerase A	P17742	1			+
Peptidylprolyl isomerase	<i>CSMSA</i>	1			+
Peroxiredoxin 1	Q63716	1			+
Peroxiredoxin 2	Q9CWJ4	2		+	

Phosphatidylethanolamine-binding protein	P70296	1	+		
Phosphoglycerate kinase	P09411	2		+	+
Probable amine transporter PFB0435c	<i>E71615</i>	1		+	
Profilin I	P10924	2		+	
Protein T11B7.1	<i>G88765</i>	1	+		
Putative	<i>AAB86742</i>	1	+		
Putative beta-actin	<i>CAA27396</i>	21		+	+
Putative homeodomain transcription factor	Q9V9A8	1			+
Putative HTH-type transcriptional regulator HI0570	P44757	1		+	
Pyruvate kinase, M1 isozyme	P14618	4	+		
Pyruvate kinase, M2 isozyme	P52480	2		+	
Retinol-binding protein I, cellular (CRBP1)	Q00915	5	+	+	
Retinol dehydrogenase, 11-cis (RDH5)	Q27979	3	+	+	+
Rhodopsin	P56514	1			+
Root-specific lectin	P15312	2		+	+
Rubber elongation factor protein	P15252	2	+	+	
S-adenosylmethionine synthetase	Q92AZ5	1			+
Serum albumin	<i>A05139</i>	1	+	+	+
Similar to angiopoietin-like factor	Q8R1Q3	1			+
Similar to retinol-binding protein 3, interstitial	Q8VD34	18	+	+	+
Skeletal muscle LIM-protein 1	P97447	5		+	+
Spectrin beta chain	Q00963	1		+	+
Suppression of tumorigenicity 13	<i>AAH03843</i>	2	+		
Thrombospondin 1	Q28178	2		+	
Transducin source	<i>IA0RB</i>	2	+		
Translation elongation factor eEF-1 alpha-1 chain	<i>EFHUI</i>	4	+		+
Translation elongation factor eEF-1 alpha-2 chain	<i>EFHUA2</i>	4		+	
Triosephosphate isomerase	P00938	3		+	+
Trypsin precursor	P00761	4	+	+	+
Trypsinogen 16	Q9Z1R9	1	+	+	+
Tubulin alpha chain	<i>UBCHA</i>	2	+	+	
Tubulin alpha-2 chain	P05213	6		+	+
Tubulin beta chain	<i>UBCHB</i>	5		+	
Tubulin beta-2 chain	P05217	3			+
Tumor susceptibility gene 101 protein	Q99816	1		+	
Undulin 1	<i>A40970</i>	7		+	+
Unnamed PKD homolog protein	Q9CZB2	2		+	
Unnamed protein product	<i>BAC03959</i>	3			+
Vitronectin receptor $\alpha$ subunit (integrin $\alpha$ v)	P43406	3		+	+
Total <sup>c</sup>			86	97	100

<sup>a</sup> Swiss Protein database and NCBI (in italics) accession numbers are shown; for links use the EXPASY server at <http://us.expasy.org/sprot/> and [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=protein&cmd=search&term=.](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=protein&cmd=search&term=)

<sup>b</sup> WGA-coated beads were incubated on the apical RPE surface in mouse eyecups, recovered, washed, and bound proteins identified as described in the text. Results from three experiments are shown from 16 mouse eyes each.

<sup>c</sup> Total of proteins identified by LC MS/MS and bioinformatics in each preparation, after discarding duplicated entries.