

Appendix 1. Candidate optic neuropathy genes expressed by retina

Gene Symbol	Title	Fold Change	P-value
RGC-specific genes			
STAT1	signal transducer and activator of transcription 1	2.5109425	0.0158207
TNFRSF21	tumor necrosis factor receptor superfamily, member 21	1.6522522	0.0150423
SCN1B	sodium channel, voltage-gated, type I, beta	1.5529667	0.0102533
BHLHE40	basic helix-loop-helix family, member e40	1.4876324	0.0279683
GNAS	GNAS complex locus	1.3101468	0.0280908
POU4F2	POU class 4 homeobox 2	1.2853699	0.0373233
IRX3	similar to iroquois homeobox protein 3	1.2185527	0.0332983
YWHAH	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eta polypeptide	1.213135	0.023257
TUBB3	tubulin, beta, 4	1.1509336	0.0218893
ADH5	similar to Alcohol dehydrogenase class 3 chi chain (Alcohol dehydrogenase class III chi chain) (S-(h	1.1489503	0.017068
MICAL2	microtubule associated monooxygenase, calponin and LIM domain containing 2	1.1292721	0.034229
FAT3	FAT tumor suppressor homolog 3 (Drosophila)	1.1047928	0.0065647
CEP97	centrosomal protein 97kDa	-1.3769419	0.0373314
NELL2	NEL-like 2 (chicken)	-1.1577966	0.0357452
Other genes of same families of RGC-specific genes			
KRT18/SCL2A3	solute carrier family 2 (facilitated glucose transporter), member 3	2.8753278	0.0018193
SLC2A5	solute carrier family 2 (facilitated glucose/fructose transporter), member 5	1.7678294	0.0109391
SLC43A3	solute carrier family 43, member 3	1.650857	0.0137701
SLC2A3	solute carrier family 2 (facilitated glucose transporter), member 3	1.5301552	0.0034578
SLC1A3	solute carrier family 1 (glial high affinity glutamate transporter), member 3	1.4930992	0.0251884
PPP2R2B	protein phosphatase 2 (formerly 2A), regulatory subunit B, beta isoform	1.3980432	0.0082597
SLC2A3	solute carrier family 2 (facilitated glucose transporter), member 3	1.3862529	0.0488243
FBXO38	F-box protein 38	1.3578043	0.000432
PPP1R3D	protein phosphatase 1, regulatory (inhibitor) subunit 3D	1.3450724	0.0343343

EEF1E1	eukaryotic translation elongation factor 1 epsilon 1	1.3043149	0.0027334
SLC2A8	solute carrier family 2 (facilitated glucose transporter), member 8	1.2689096	0.0198094
FBXW2	F-box and WD repeat domain containing 2	1.2618512	0.0109789
HSPB8	heat shock 22kDa protein 8	1.1267034	0.0118648
HSP90AB1	heat shock 90kDa protein 1, beta	1.1623887	0.0173807
EEF1D	eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange protein)	1.1612612	0.0098771
SLC35F3	similar to solute carrier family 35, member F4	-1.770782	0.005914
SLC25A17	solute carrier family 25 (mitochondrial carrier; peroxisomal membrane protein, 34kDa), member 17	-1.3710936	0.0366594
RPAP2	RNA polymerase II associated protein 2	-1.295419	0.0371591
SLC5A3	solute carrier family 5 (sodium/myo-inositol cotransporter), member 3	-1.2696601	0.0096541
RAB11B	RAB11B, member RAS oncogene family	-1.2365775	0.0460836
SLC16A1	solute carrier family 16, member 1	-1.2200011	0.0213991
RGS20	regulator of G-protein signaling 20	-1.1976926	0.0167751
TLE4	transducin-like enhancer of split 4 (E(sp1) homolog, Drosophila)	-1.1333328	0.0176676
SMC5	structural maintenance of chromosomes 5	-1.113403	0.0387502
Genes related to glial cell activation			
CP	ceruloplasmin (ferroxidase)	5.043789	0.010322
GFAP	glial fibrillary acidic protein	4.4226785	0.0374091
TIMP-1	tissue inhibitor of matrix metalloproteinase-1	3.2303329	0.0135389
C1S	complement component 1, s subcomponent	2.8921256	0.0401858
LCN2	lipocalin 2	2.5766118	0.0340852
AIF1	allograft inflammatory factor 1	1.7207781	0.0194929
EPHA4	EPH receptor A4	-1.4290394	0.0285887
CAV1	caveolin 1, caveolae protein, 22kDa	-1.2618691	0.000941
EPHA3	EPH receptor A3	-1.225286	0.0095007
Genes related to cell survival and death			
MCP-1	chemokine CCL2/MCP-1	8.251426	0.018158
GADD45B	growth arrest and DNA-damage-inducible, beta	3.143225	0.0125194
B2M	beta-2-microglobulin	2.899601	0.0196231
FAS	Fas (TNF receptor superfamily, member 6)	2.807665	0.0339395
IFIH1	interferon induced with helicase C domain 1	2.255133	0.0027007
BDNF	brain-derived neurotrophic factor	2.1950967	0.0447258
Genes related to inflammatory reaction			
IL7	interleukin 7	7.310441	0.0241936
CCL8	chemokine (C-C motif) ligand 8	3.9127321	0.0077418
CXCL10	chemokine (C-X-C motif) ligand 10	3.7878022	0.0148449
TNFRSF11B	tumor necrosis factor receptor superfamily, member 11b	1.828143	0.0483607

MMP2	matrix metalloproteinase 2 (gelatinase A, 72kDa gelatinase, 72kDa type IV collagenase)	1.7239592	0.0128197
IL8RB	similar to High affinity interleukin-8 receptor B (IL-8R B) (CXCR-2) (GRO/MGSA receptor) (IL-8 recep	1.3863766	0.0188241
IL1B	interleukin 1, beta	1.3627887	0.0136711
IL5	interleukin 5	1.2242618	0.0230377
IL2	interleukin 2 receptor, gamma	-1.1318717	0.0486011
