

**Supplemental Table 1.** List of 321 human genes isolated from hRET-SSH cDNA library

<b>Gene symbol</b>	<b>GenBank acc.no.</b>	<b>Gene name</b>
ABCA4	NM_000350	ATP-binding cassette, sub-family A (ABC1), member 4
ABCA5	NM_018672	ATP-binding cassette, sub-family A (ABC1), member 5
ABCC5	NM_005688	ATP-binding cassette, sub-family C (CFTR/MRP), member 5
ABCC5var	-	ATP-binding cassette, sub-family C (CFTR/MRP), member 5, splice variant
ADD1	NM_176801	adducin 1 (alpha)
AF1Q	NM_006818	ALL1-fused gene from chromosome 1q
ALS2CR4	NM_152388	amyotrophic lateral sclerosis 2 (juvenile) chromosome region, candidate 4
ANK2	NM_001148	ankyrin 2, neuronal
APLP2	NM_001642	amyloid beta (A4) precursor-like protein 2
AQP4	NM_004028	aquaporin 4
ARGBP2	NM_021069	Arg/Abl-interacting protein ArgBP2
ARL3	NM_004311	ADP-ribosylation factor-like 3
ARL6IP	NM_015161	ADP-ribosylation factor-like 6 interacting protein
ARR3	NM_004312	arrestin 3, retinal (X-arrestin)
ATP2C1	NM_014382	ATPase, Ca <sup>++</sup> transporting, type 2C, member 1
BBS4	NM_033028	Bardet-Biedl syndrome 4
BCoR	NM_017745	BCL6 co-repressor
BEX1	NM_018476	brain expressed, X-linked 1
BMI1	NM_005180	B lymphoma Mo-MLV insertion region (mouse)
BTAF1	NM_003972	BTAF1 RNA polymerase II, B-TFIID transcription factor-associated, 170kDa (Mot1 homolog, <i>S. cerevisiae</i> )
C13orf7	NM_024546	chromosome 13 open reading frame 7
C14orf52	NM_145165	chromosome 14 open reading frame 52
C1orf37	NM_138391	chromosome 1 open reading frame 37
C1QTNF3	NM_181435	C1q and tumor necrosis factor related protein 3
C20ORF103	NM_012261	chromosome 20 open reading frame 103
C3ORF4	NM_019895	chromosome 3 open reading frame 4
C4ORF11	NM_201547	chromosome 4 open reading frame 11
C6orf49	NM_013397	chromosome 6 open reading frame 49
CABP5	NM_019855	calcium binding protein 3 or 5
CADPS	NM_003716	Ca <sup>2+</sup> -dependent activator protein for secretion
CAMK2D	NM_172127	calcium/calmodulin-dependent protein kinase (CaM kinase) II delta
CCND2	NM_001759	cyclin D2
CCT3	NM_005998	chaperonin containing TCP1, subunit 3 (gamma)

CD47	NM_001777	CD47 antigen (Rh-related antigen, integrin-associated signal transducer)
CETN3	NM_004365	centrin, EF-hand protein, 3 (CDC31 homolog, yeast)
CGGBP	NM_003663	CGG triplet repeat binding protein 1
CLASP2	AB014527	cytoplasmic linker associated protein 2
CLK1	NM_004071	CDC-like kinase 1
CLUL1	NM_014410	clusterin-like 1 (retinal)
CNGA1	NM_000087	cyclic nucleotide gated channel alpha 1
CNGB1	NM_001297	cyclic nucleotide gated channel beta 1
CNOT2	NM_014515	CCR4-NOT transcription complex, subunit 2
CNOT7	NM_013354	CCR4-NOT transcription complex, subunit 7
COG5	NM_006348	component of oligomeric golgi complex 5
COL25A1	NM_032518	collagen, type XXV, alpha 1
COPS4	NM_016129	COP9 constitutive photomorphogenic homolog subunit 4 (Arabidopsis)
COX6C	NM_004374	cytochrome c oxidase subunit VIc
CPE	NM_001873	carboxypeptidase E
CRSP9	NM_004270	cofactor required for Sp1 transcriptional activation, subunit 9, 33kDa
CSTF1	NM_001324	cleavage stimulation factor, 3' pre-RNA, subunit 1, 50kDa
DDX3	NM_001356	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, X-linked
DIP2	NM_015151	disco-interacting protein 2 (Drosophila) homolog
DIRAS2	NM_017594	DIRAS family, GTP-binding RAS-like 2
DKFZp547C176	NM_018712	hypothetical protein DKFZp547C176
DKFZp547J1816	AL832535	hypothetical protein DKFZp547J1816
DKFZP564A022	NM_030954	hypothetical protein DKFZp564A022
DKFZp564B0769	NM_032870	hypothetical protein DKFZp564B0769
DKFZP566B183	NM_015509	DKFZP566B183 protein
DKFZp566D234	NM_020116	hypothetical protein DKFZp566D234
DKFZP566K1924	NM_015463	DKFZP566K1924 protein
DKFZp761D221	NM_032291	hypothetical protein DKFZp761D221
DMD	NM_004023	dystrophin
DNER	NM_139072	delta-notch-like EGF repeat-containing transmembrane
DR1	NM_001938	down-regulator of transcription 1, TBP-binding (negative cofactor 2)
DTNBP1	NM_183040	dystrobrevin binding protein 1
EDIL3	NM_005711	EGF-like repeats and discoidin I-like domains 3
ELD/OSA1	NM_017519	BRG1-binding protein ELD/OSA1
ELOVL4	NM_022726	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 4
ENO2	NM_001975	enolase 2, (gamma, neuronal)

ENSA	NM_004436	endosulfine alpha
EPB41L2	NM_001431	erythrocyte membrane protein band 4.1-like 2
ERH	NM_004450	enhancer of rudimentary homolog (Drosophila)
ESD	NM_001984	esterase D/formylglutathione hydrolase
EXTL2	NM_001439	exostoses (multiple)-like 2
FABP7	NM_001446	fatty acid binding protein 7, brain
FACL6	NM_015256	fatty-acid-Coenzyme A ligase, long-chain 6
FAIM	NM_018147	Fas apoptotic inhibitory molecule
FBXO3	NM_012175	F-box only protein 3
FCMD	NM_006731	Fukuyama type congenital muscular dystrophy (fukutin)
FLJ10392	BX648138	hypothetical protein FLJ10392
FLJ10618	NM_018155	hypothetical protein FLJ10618
FLJ11648	AK021710	hypothetical protein FLJ11648
FLJ12903	NM_022753	hypothetical protein FLJ12903
FLJ20086	BC040532	hypothetical protein FLJ20086
FLJ20668	NM_017923	hypothetical protein FLJ20668
FLJ22490	NM_024790	hypothetical protein FLJ22490
FLJ23342	NM_024631	hypothetical protein FLJ23342
FLJ23460	AK027113	hypothetical protein FLJ23460
FLJ23597	AK027250	hypothetical protein FLJ23597
FLJ23712	AK074292	hypothetical protein FLJ23712
FLJ30499	AK055061	hypothetical protein FLJ30499
FLJ30906	AK055468	hypothetical protein FLJ30906
FLJ31121	NM_144723	hypothetical protein FLJ31121
FLJ32001	NM_152609	hypothetical protein FLJ32001
FLJ32803	NM_153039	hypothetical protein FLJ32803
FLJ34215	AK091534	hypothetical protein FLJ34215
FLJ36874	NM_152716	hypothetical protein FLJ36874
FLJ36903	AK094222	hypothetical protein FLJ36903
FRAP1	NM_004958	FK506 binding protein 12-rapamycin associated protein 1
FRZB	NM_001463	frizzled-related protein
FUBP1	NM_003902	far upstream element (FUSE) binding protein 1
FUSIP1	NM_006625	FUS interacting protein (serine-arginine rich) 1
GASP	NM_014710	G protein-coupled receptor-associated sorting protein
GLUL	NM_002065	glutamate-ammonia ligase (glutamine synthase)
GNAT1	NM_144499	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1

GNAT2	NM_005272	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 2
GNB1	NM_002074	guanine nucleotide binding protein (G protein), beta polypeptide 1
GNGT1	NM_021955	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1
GNGT2	NM_031498	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2
GPM6A	NM_005277	glycoprotein M6A
GPM6B	NM_005278	glycoprotein M6B
GRSP1	XM_114303	GRP1-binding protein GRSP1
GUCA1A	BX647537	guanylate cyclase activator 1A (retina)
GUCA1C	BM685830	guanylate cyclase activator 1C
GUCY2F	NM_001522	guanylate cyclase 2F, retinal
H2AV	NM_138635	histone H2A.F/Z variant
H3F3B	NM_005324	H3 histone, family 3B (H3.3B)
HAKAI	NM_024814	Cas-Br-M (murine) ecotropic retroviral transforming sequence-like 1
HAT1	NM_003642	histone acetyltransferase 1
HCN1	NM_021072	hyperpolarization activated cyclic nucleotide-gated potassium channel 1
HDCMA18P	NM_016648	HDCMA18P protein
HK2	NM_000189	hexokinase 2
HKR1	NM_181786	GLI-Kruppel family member HKR1
HMG1	NM_004965	high-mobility group nucleosome binding domain 1
HSPC159	NM_014181	HSPC159 protein
HSPC163	NM_014184	HSPC163 protein
HSPC210	NM_016472	chromosome 14 open reading frame 129
HSPCA	AK056446	heat shock 90kDa protein 1, alpha
IGSF4	NM_014333	immunoglobulin superfamily, member 4
IKBKAP	NM_003640	inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase complex-associated protein
IL6ST	NM_002184	interleukin 6 signal transducer (gp130, oncostatin M receptor)
IMPG1	NM_001563	interphotoreceptor matrix proteoglycan 1
IMPG2	NM_016247	interphotoreceptor matrix proteoglycan 2
JJAZ1	NM_015355	joined to JAZF1
K-ALPHA-1	NM_006082	tubulin, alpha, ubiquitous
KCNB1	NM_004975	potassium voltage-gated channel, Shab-related subfamily, member 1
KCNJ13	NM_002242	potassium inwardly-rectifying channel, subfamily J, member 13
KDR	NM_002253	kinase insert domain receptor (a type III receptor tyrosine kinase)
KIAA0102	NM_014752	KIAA0102 gene product
KIAA0117	NM_015014	KIAA0117 protein
KIAA0191	BX648248	KIAA0191 protein

KIAA0790	NM_015278	KIAA0790 protein
KIAA1078	XM_036589	KIAA1078 protein
KIAA1284	BC051698	KIAA1284 protein
KIAA1376	NM_020801	KIAA1376 protein
KIAA1576	NM_020927	KIAA1576 protein
KIAA1579	AB046799	hypothetical protein FLJ10770
KIAA1673	NM_030627	KIAA1673 protein
KIAA1680	XM_371698	KIAA1680 protein
KIAA1805	NM_032434	KIAA1805 protein
KIF5A	NM_004984	kinesin family member 5A
KIF5B	NM_004521	kinesin family member 5B
KLHL8	NM_020803	kelch-like 8 (Drosophila)
KPNB3	NM_002271	karyopherin (importin) beta 3
LARS	NM_020117	leucyl-tRNA synthetase
LGALS8	NM_006499	lectin, galactoside-binding, soluble, 8 (galectin 8)
LOC116228	AF448858	hypothetical protein LOC116228
LOC126731	NM_145257	LOC126731
LOC139231	BC017665	hypothetical protein BC016683
LOC51234	NM_016454	hypothetical protein LOC51234
LOC51240	NM_016467	hypothetical protein LOC51240
LOC51762	NM_016530	RAB-8b protein
LOC55871	NM_018491	hypothetical protein LOC55871
LOC58489	AK092758	hypothetical protein from EUROIMAGE 588495
LOC64182	XM_290895	hypothetical protein LOC64182
LOC90701	NM_033280	similar to signal peptidase complex (18kD)
LOC92196	XM_043500	hypothetical protein LOC92196
LOC92912	NM_173469	hypothetical protein LOC92912
LOH11CR2A	NM_014622	loss of heterozygosity, 11, chromosomal region 2, gene A
LRP2	NM_004525	low density lipoprotein-related protein 2
LUC7A	NM_016424	cisplatin resistance-associated overexpressed protein
MAK	NM_005906	male germ cell-associated kinase
MAN1	NM_014319	integral inner nuclear membrane protein
MANBA	NM_005908	mannosidase, beta A, lysosomal
MAP2	NM_031846	microtubule-associated protein 2
MAPRE2	NM_014268	microtubule-associated protein, RP/EB family, member 2
MATN2	NM_002380	matrilin 2

MATR3	NM_018834	matrin 3
MBNL2	NM_144778	muscleblind-like 2 (Drosophila)
MEGF10	NM_032446	MEGF10 protein
MGC14816	NM_144620	hypothetical protein MGC14816
MGC23980	NM_018325	hypothetical protein MGC23980
MGC34648	NM_152660	hypothetical protein MGC34648
MGC5149	XM_051200	fatso
MLF1	NM_022443	myeloid leukemia factor 1
MLL5	NM_182931	myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homolog, Drosophila)
MLLT2	NM_005935	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 2
MORF4L1	NM_006791	mortality factor 4 like 1
MPP4	NM_033066	membrane protein, palmitoylated 4 (MAGUK p55 subfamily member 4)
MTMR6	NM_004685	myotubularin related protein 6
MTMR9	NM_015458	myotubularin related protein 9
NAPB	AK126340	N-ethylmaleimide-sensitive factor attachment protein, beta
NBEA	NM_015678	neurobeachin
NCOA2	NM_006540	nuclear receptor coactivator 2
NDRG4	NM_020465	NDRG family member 4
NDUFA5	NM_005000	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5, 13kDa
NEFL	NM_006158	neurofilament, light polypeptide 68kDa
NONO	NM_007363	non-POU domain containing, octamer-binding
NP25	NM_013259	neuronal protein
NR2E3	NM_016346	nuclear receptor subfamily 2, group E, member 3
NRL	NM_006177	neural retina leucine zipper
NSF	NM_006178	N-ethylmaleimide-sensitive factor
NT5E	NM_002526	5'-nucleotidase, ecto (CD73)
NUDT3	NM_006703	nudix (nucleoside diphosphate linked moiety X)-type motif 3
OPN1SW	NM_001708	opsin 1 (cone pigments), short-wave-sensitive (color blindness, tritan)
OTX2	NM_021728	orthodenticle homolog 2 (Drosophila)
OXR1	NM_181354	oxidation resistance 1
p44S10	NM_014814	proteasome regulatory particle subunit p44S10
PAIP2	NM_016480	polyadenylate-binding protein-interacting protein 2
PC4	NM_006713	activated RNA polymerase II transcription cofactor 4
PCP4	NM_006198	Purkinje cell protein 4
PDC	NM_002597	phosducin
PDCD4	NM_145341	programmed cell death 4 (neoplastic transformation inhibitor)

PDE4DIP	XM_290895	phosphodiesterase 4D interacting protein (myomegalin)
PDE6A	NM_000440	phosphodiesterase 6A, cGMP-specific, rod, alpha
PDE6H	NM_006205	phosphodiesterase 6H, cGMP-specific, cone, gamma
PFKP	NM_002627	phosphofructokinase, platelet
PHAX	NM_032177	likely ortholog of mouse phosphorylated adaptor for RNA export
PIK3C3	NM_002647	phosphoinositide-3-kinase, class 3
PKM2	NM_182470	pyruvate kinase, muscle
PLCD4	NM_032726	phospholipase C, delta 4
PLEKHB1	NM_021200	pleckstrin homology domain containing, family B (evectins) member 1
PNN	NM_002687	pinin, desmosome associated protein
PNUTL2	NM_080417	peanut-like 2 (Drosophila)
PPFIA2	NM_003625	protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 2
PPP1CB	NM_002709	protein phosphatase 1, catalytic subunit, beta isoform
PPP2R2B	NM_004576	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), beta isoform
PRKCN	NM_005813	protein kinase C, nu
PROM1	NM_006017	prominin 1
PSIP2	NM_033222	PC4 and SFRS1 interacting protein 2
PSMD10	NM_002814	proteasome (prosome, macropain) 26S subunit, non-ATPase, 10
PUM2	NM_015317	pumilio homolog 2 (Drosophila)
RAB18	NM_021252	RAB18, member RAS oncogene family
RAD21	NM_006265	RAD21 homolog (S. pombe)
RASSF2	NM_014737	Ras association (RalGDS/AF-6) domain family 2
RDH12	NM_152443	retinol dehydrogenase 12 (all-trans and 9-cis)
RDS	NM_000322	retinal degeneration, slow
RFC4	NM_002916	replication factor C (activator 1) 4, 37kDa
RFC5	NM_181578	replication factor C (activator 1) 5, 36.5kDa
RFRP	NM_022150	chromosome 7 open reading frame 9
RHO	NM_000539	rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)
RIPX	NM_014961	rap2 interacting protein x
RNF14	NM_004290	ring finger protein 14
ROM1	NM_000327	retinal outer segment membrane protein 1
RORA	NM_134260	RAR-related orphan receptor A
RORB	NM_006914	RAR-related orphan receptor B
RP1	NM_006269	retinitis pigmentosa 1 (autosomal dominant)
RPE65	NM_000329	retinal pigment epithelium-specific protein 65kDa
RPL17	NM_000985	ribosomal protein L17

RPS27A	NM_002954	ribosomal protein S27a
RSU1	NM_012425	Ras suppressor protein 1
SAG	NM_000541	S-antigen; retina and pineal gland (arrestin)
SCG2	NM_003469	secretogranin II (chromogranin C)
SEC15L	NM_019053	SEC15-like 1 ( <i>S. cerevisiae</i> )
SEC22L1	NM_004892	SEC22 vesicle trafficking protein-like 1 ( <i>S. cerevisiae</i> )
SELK	NM_021237	selenoprotein K
SERF1A	NM_021967	small EDRK-rich factor 1A (telomeric)
SF3A3	NM_006802	splicing factor 3a, subunit 3, 60kDa
SIAH1	BX647064	seven in absentia homolog 1 ( <i>Drosophila</i> )
SKP1A	NM_006930	S-phase kinase-associated protein 1A (p19A)
SLC16A1	NM_003051	solute carrier family 16 (monocarboxylic acid transporters), member 1
SLC1A2	AY066021	solute carrier family 1 (glial high affinity glutamate transporter), member 2
SLC1A3	NM_004172	solute carrier family 1 (glial high affinity glutamate transporter), member 3
SLC24A1	NM_004727	solute carrier family 24 (sodium/potassium/calcium exchanger), member 1
SLC36A4	NM_152313	solute carrier family 36 (proton/amino acid symporter), member 4
SLC38A1	NM_030674	solute carrier family 38, member 1
SLC4A10	NM_022058	solute carrier family 4, sodium bicarbonate transporter-like, member 10
SLC4A7	NM_003615	solute carrier family 4, sodium bicarbonate cotransporter, member 7
SMAP	NM_014267	small acidic protein
SMARCA5	NM_003601	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5
SMP1	NM_014313	small membrane protein 1
SNAP25	NM_003081	synaptosomal-associated protein, 25kDa
SNRPG	NM_003096	small nuclear ribonucleoprotein polypeptide G
SOCS5	NM_144949	suppressor of cytokine signaling 5
SP3	NM_003111	Sp3 transcription factor
SR140	XM_031553	U2-associated SR140 protein
SRP54	NM_003136	signal recognition particle 54kDa
SSX2IP	NM_014021	synovial sarcoma, X breakpoint 2 interacting protein
STAG2	NM_006603	stromal antigen 2
STMN1	NM_005563	stathmin 1/oncoprotein 18
STMN2	NM_007029	stathmin-like 2
STX12	NM_177424	syntaxin 12
STXBP1	NM_003165	syntaxin binding protein 1
SUSP1	NM_015571	SUMO-1-specific protease
SV2B	NM_014848	synaptic vesicle glycoprotein 2B



SYT1	NM_005639	synaptotagmin I
SYT4	NM_020783	synaptotagmin IV
TDE1	NM_006811	tumor differentially expressed 1
TFRC	NM_003234	transferrin receptor (p90, CD71)
TINP1	NM_014886	TGF beta-inducible nuclear protein 1
TIP120A	NM_018448	TBP-interacting protein
TM9SF2	NM_004800	transmembrane 9 superfamily member 2
TNKS2	NM_025235	tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase 2
TOP2B	NM_001068	topoisomerase (DNA) II beta 180kDa
TPD52	NM_005079	tumor protein D52
TP11	NM_000365	triosephosphate isomerase 1
TPT1	NM_003295	tumor protein, translationally-controlled 1
TRB2	NM_021643	tribbles homolog 2
TRIM36	NM_018700	tripartite motif-containing 36
TRIP8	NM_004241	thyroid hormone receptor interactor 8
TRPC1	NM_003304	transient receptor potential cation channel, subfamily C, member 1
TSGA14	NM_018718	testis specific, 14
TXN	NM_003329	thioredoxin
UBE2N	NM_003348	ubiquitin-conjugating enzyme E2N (UBC13 homolog, yeast)
UBE4A	NM_004788	ubiquitination factor E4A (UFD2 homolog, yeast)
UBL3	BC044582	ubiquitin-like 3
USP10	NM_005153	ubiquitin specific protease 10
USP16	NM_006447	ubiquitin specific protease 16
USP32	NM_032582	ubiquitin specific protease 32
VDAC3	NM_005662	voltage-dependent anion channel 3
VDP	NM_003715	vesicle docking protein p115
VPS35	NM_018206	vacuolar protein sorting 35 (yeast)
VPS41	NM_014396	vacuolar protein sorting 41 (yeast)
WIF1	NM_007191	WNT inhibitory factor 1
WTAP	NM_004906	Wilms tumor 1 associated protein
XPOT	BC020569	exportin, tRNA (nuclear export receptor for tRNAs)
YWHAZ	NM_145690	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
ZDHC2	NM_016353	zinc finger, DHHC domain containing 2
ZFP36L2	NM_006887	zinc finger protein 36, C3H type-like 2
ZNF161	NM_007146	zinc finger protein 161
ZNF291	NM_020843	zinc finger protein 291

**Supplemental Table 2.** List of 343 human genes isolated from bRPE-SSH cDNA library

<b>Gene symbol</b>	<b>GenBank acc.no.</b>	<b>Gene name</b>
ABCA4	NM_000350	ATP-binding cassette, sub-family A (ABC1), member 4
ABCC5	NM_005688	ATP-binding cassette, sub-family C (CFTR/MRP), member 5
ABR	NM_021962	active BCR-related gene
ACAA2	NM_006111	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase)
ACAS2	NM_018677	acetyl-Coenzyme A synthetase 2 (ADP forming)
AEBP1	NM_001129	AE binding protein 1
AHCYL1	NM_006621	S-adenosylhomocysteine hydrolase-like 1
AKR1A1	NM_006066	aldo-keto reductase family 1, member A1 (aldehyde reductase)
ALDOAP2	M21191	aldolase A, fructose-bisphosphate pseudogene 2
AP1S2	NM_003916	adaptor-related protein complex 1, sigma 2 subunit
APR-3	NM_016085	apoptosis related protein APR-3
ARHC	NM_175744	ras homolog gene family, member C
ARL3	NM_004311	ADP-ribosylation factor-like 3
ARL6IP	NM_015161	ADP-ribosylation factor-like 6 interacting protein
ART3	NM_001179	ADP-ribosyltransferase 3
ATOX1	NM_004045	ATX1 antioxidant protein 1 homolog (yeast)
ATP1A3	NM_152296	ATPase, Na <sup>+</sup> /K <sup>+</sup> transporting, alpha 3 polypeptide
ATP1B2	M81181	ATPase, Na <sup>+</sup> /K <sup>+</sup> transporting, beta 2 polypeptide
ATP5B	NM_001686	ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, beta polypeptide
ATP5G2	NM_005176	ATP synthase, H <sup>+</sup> transporting, mitochondrial F0 complex, subunit c (subunit 9), isoform 2
ATP5L	NM_006476	ATP synthase, H <sup>+</sup> transporting, mitochondrial F0 complex, subunit g
ATP6V0A1	NM_005177	ATPase, H <sup>+</sup> transporting, lysosomal V0 subunit a isoform 1
ATP6V0B	NM_004047	ATPase, H <sup>+</sup> transporting, lysosomal 21kDa, V0 subunit c"
B4GALT1	NM_001497	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1
BCDO1	NM_017429	beta-carotene 15, 15'-dioxygenase
BCL2L1	NM_138578	BCL2-like 1
BCRP1	AL117694	barrier to autointegration factor 1
BHLHB2	NM_003670	basic helix-loop-helix domain containing, class B, 2
BMP7	NM_001719	bone morphogenetic protein 7 (osteogenic protein 1)
BNIP2	NM_004330	BCL2/adenovirus E1B 19kDa interacting protein 2
BSG	NM_001728	basigin (OK blood group)
BZW2	NM_014038	basic leucine zipper and W2 domains 2

C20orf16	NM_019025	spermine oxidase
C20orf43	NM_016407	chromosome 20 open reading frame 43
C6orf49	NM_013397	chromosome 6 open reading frame 49
CA11	NM_001217	carbonic anhydrase XI
CA12	NM_001218	carbonic anhydrase XII
CA14	NM_012113	carbonic anhydrase XIV
CACNB1	NM_000723	calcium channel, voltage-dependent, beta 1 subunit
CALU	NM_001219	calumenin
CDC26	NM_139286	cell division cycle 26
CDH3	NM_001793	cadherin 3, type 1, P-cadherin (placental)
CDK2	NM_001798	cyclin-dependent kinase 2
CENTD2	NM_139181	centaurin, delta 2
CKMT1	NM_020990	creatine kinase, mitochondrial 1 (ubiquitous)
CLIC6	NM_053277	chloride intracellular channel 6
CLIPR-59	NM_015526	CLIP-170-related protein
CLN2	NM_000391	ceroid-lipofuscinosis, neuronal 2, late infantile (Jansky-Bielschowsky disease)
CLU	NM_001831	clusterin (complement lysis inhibitor, SP-40,40, sulfated glycoprotein 2, testosterone-repressed prostate message :
COG1	NM_018714	component of oligomeric golgi complex 1
COG5	NM_006348	component of oligomeric golgi complex 5
COG7	NM_153603	component of oligomeric golgi complex 7
COPA	NM_004371	coatamer protein complex, subunit alpha
COX4I1	NM_001861	cytochrome c oxidase subunit IV isoform 1
COX7C	NM_001867	cytochrome c oxidase subunit VIIc
COX8	NM_004074	cytochrome c oxidase subunit VIII
CSF1R	NM_005211	colony stimulating factor 1 receptor, formerly McDonough feline sarcoma viral (v-fms) oncogene homolog
CST3	NM_000099	cystatin C (amyloid angiopathy and cerebral hemorrhage)
CTSK	NM_000396	cathepsin K (pseudotumor calcinosis)
D15Wsu75e	XM_039495	DNA segment, Chr 15, Wayne State University 75, expressed
DAD1	NM_001344	defender against cell death 1
DCOHM	NM_032151	dimerization cofactor of hepatocyte nuclear factor 1 ( HNF1) from muscle
DDOST	NM_005216	dolichyl-diphosphooligosaccharide-protein glycosyltransferase
DHPS	NM_001930	deoxyhypusine synthase
DHRS4	NM_198083	dehydrogenase/reductase (SDR family) member 4
DKFZp434N0419	AL833909	DKFZp434N0419 protein
DKFZP547E1010	NM_015607	DKFZP547E1010 protein
DKFZP564D206	NM_015464	DKFZP564D206 protein

DKFZP564K1964	NM_015544	DKFZP564K1964 protein
DKFZP564M082	NM_014042	DKFZP564M082 protein
DKFZp761G0122	NM_152661	hypothetical protein DKFZp761G0122
Dlc2	NM_080677	dynein light chain 2
DPM2	NM_152690	dolichyl-phosphate mannosyltransferase polypeptide 2, regulatory subunit
DUSP6	NM_001946	dual specificity phosphatase 6
E46L	NM_013236	like mouse brain protein E46
EBP	NM_006579	emopamil binding protein (sterol isomerase)
EEF1E1	NM_004280	eukaryotic translation elongation factor 1 epsilon 1
EFEMP1	NM_004105	EGF-containing fibulin-like extracellular matrix protein 1
EIF3S2	NM_003757	eukaryotic translation initiation factor 3, subunit 2 beta, 36kDa
ELOVL1	NM_022821	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 1
ELOVL2	BC050278	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 2
ENPP2	NM_006209	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)
EPB41L1	NM_012156	erythrocyte membrane protein band 4.1-like 1
ERH	NM_004450	enhancer of rudimentary homolog (Drosophila)
EZH1	NM_001991	enhancer of zeste homolog 1 (Drosophila)
F2RL2	NM_004101	coagulation factor II (thrombin) receptor-like 2
FADS1	NM_013402	fatty acid desaturase 1
FLJ10504	NM_018116	misato
FLJ10803	NM_018224	hypothetical protein FLJ10803
FLJ11305	NM_018386	hypothetical protein FLJ11305
FLJ11726	AK021788	hypothetical protein FLJ11726
FLJ11756	AK021818	hypothetical protein FLJ11756
FLJ12076	AK022138	hypothetical protein FLJ12076
FLJ12089	NM_024552	hypothetical protein FLJ12089
FLJ12287	NM_022367	hypothetical protein FLJ12287 similar to semaphorins
FLJ20580	NM_017887	hypothetical protein FLJ20580
FLJ21032	NM_024906	hypothetical protein FLJ21032
FLJ22055	NM_024779	hypothetical protein FLJ22055
FLJ32069	AK056631	hypothetical protein FLJ32069
FLJ40773	NM_152666	hypothetical protein FLJ40773
FLJ90119	NM_153347	hypothetical protein FLJ90119
FLN29	NM_006700	FLN29 gene product
FLOT2	NM_004475	flotillin 2
FMOD	NM_002023	fibromodulin

FMR2	NM_002025	fragile X mental retardation 2
FOXO1A	NM_002015	forkhead box O1A (rhabdomyosarcoma)
FRZB	NM_001463	frizzled-related protein
FTH1	NM_002032	ferritin, heavy polypeptide 1
GABRR2	NM_002043	gamma-aminobutyric acid (GABA) receptor, rho 2
GALNT10	NM_017540	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 10 (GalNAc-T10)
GAPD	NM_002046	glyceraldehyde-3-phosphate dehydrogenase
GDF11	NM_005811	growth differentiation factor 11
GJB1	NM_000166	gap junction protein, beta 1, 32kDa (connexin 32, Charcot-Marie-Tooth neuropathy, X-linked)
GL009	NM_032492	hypothetical protein GL009
GLUL	NM_002065	glutamate-ammonia ligase (glutamine synthase)
GNAT1	NM_144499	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1
GNB3	NM_002075	guanine nucleotide binding protein (G protein), beta polypeptide 3
GNGT1	NM_021955	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1
GOT1	NM_002079	glutamic-oxaloacetic transaminase 1, soluble (aspartate aminotransferase 1)
GOT2	NM_002080	glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2)
GPI	NM_000175	glucose phosphate isomerase
GPM6A	NM_005277	glycoprotein M6A
GPM6B	NM_005278	glycoprotein M6B
GPRC5B	NM_016235	G protein-coupled receptor, family C, group 5, member B
GPX4	NM_002085	glutathione peroxidase 4 (phospholipid hydroperoxidase)
GSTM4	NM_000850	glutathione S-transferase M4
GSTM5	NM_000851	glutathione S-transferase M5
GTL3	NM_013242	likely ortholog of mouse gene trap locus 3
H2BFB	NM_021063	histone 1, H2bd
H2BFQ	NM_003528	histone 2, H2be
HADH2	NM_004493	hydroxyacyl-Coenzyme A dehydrogenase, type II
HERPUD1	NM_014685	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1
HIF1AN	NM_017902	hypoxia-inducible factor 1, alpha subunit inhibitor
HM13	NM_178582	histocompatibility (minor) 13
HNRPDL	NM_005463	heterogeneous nuclear ribonucleoprotein D-like
HSD17B8	NM_014234	hydroxysteroid (17-beta) dehydrogenase 8
HSPC051	NM_013387	ubiquinol-cytochrome c reductase complex (7.2 kD)
HSPC111	NM_016391	hypothetical protein HSPC111
HSPCB	NM_007355	heat shock 90kDa protein 1, beta
IDH3B	NM_174856	isocitrate dehydrogenase 3 (NAD+) beta

IDH3G	NM_174869	isocitrate dehydrogenase 3 (NAD+) gamma
IMP13	NM_014652	importin 13
IVD	NM_002225	isovaleryl Coenzyme A dehydrogenase
JWA	NM_006407	cytoskeleton related vitamin A responsive protein
KCNJ10	NM_002241	potassium inwardly-rectifying channel, subfamily J, member 10
KCNQ4	NM_004700	potassium voltage-gated channel, KQT-like subfamily, member 4
KIAA0157	NM_032182	KIAA0157 protein
KIAA0445	AB007914	KIAA0445 gene product
KIAA0446	AB007915	KIAA0446 gene product
KIAA0556	XM_044632	KIAA0556 protein
KIAA0759	NM_015305	KIAA0759
KIAA1077	NM_015170	KIAA1077 protein
KIAA1094	NM_014908	KIAA1094 protein
KIAA1189	AB033015	KIAA1189 protein
KIAA1576	NM_020927	KIAA1576 protein
KIAA1608	NM_024820	KIAA1608 protein
KIAA1775	NM_033100	MT-protocadherin
LARGE	NM_004737	like-glycosyltransferase
LASS2	NM_181746	LAG1 longevity assurance homolog 2 (S. cerevisiae)
LDHB	NM_002300	lactate dehydrogenase B
LOC119587	NM_198148	hypothetical protein LOC119587
LOC127262	NM_182752	hypothetical protein LOC127262
LOC128308	NM_181441	hypothetical protein LOC128308
LOC136234	-	hypothetical protein LOC136234
LOC149464	AK056786	hypothetical protein LOC149464
LOC150862	-	hypothetical protein LOC150862
LOC151361	-	hypothetical protein LOC151361
LOC154467	XM_166346	hypothetical protein LOC154467
LOC161145	NM_182526	hypothetical protein LOC161145
LOC203570	-	hypothetical protein LOC203570
LOC283211	-	hypothetical protein LOC285148
LOC283652	-	hypothetical protein LOC283652
LOC283760	-	hypothetical protein LOC283760
LOC284125	-	hypothetical protein LOC284125
LOC284438	-	hypothetical protein LOC284438
LOC285148	AK092982	hypothetical protein LOC285148

LOC51256	NM_016495	hypothetical protein LOC51256
LOC57406	NM_020676	hypothetical protein LOC57406
LOC81558	NM_030802	C/EBP-induced protein
LOC91549	-	hypothetical protein LOC91549
LOXL1	NM_005576	lysyl oxidase-like 1
LRAT	NM_004744	lecithin retinol acyltransferase (phosphatidylcholine--retinol O-acyltransferase)
LRP1B	NM_018557	low density lipoprotein-related protein 1B (deleted in tumors)
MAGED1	NM_006986	melanoma antigen, family D, 1
MANBAL	NM_022077	mannosidase, beta A, lysosomal-like
MAOB	NM_000898	monoamine oxidase B
MAP2K1	NM_002755	mitogen-activated protein kinase kinase 1
MAPKBP1	XM_031706	likely ortholog of mouse mitogen activated protein kinase binding protein 1
MERTK	NM_006343	c-mer proto-oncogene tyrosine kinase
MFRP	NM_031433	membrane frizzled-related protein
MGC10540	NM_032353	hypothetical protein MGC10540
MGC14161	NM_032892	hypothetical protein MGC14161
MGC23937	NM_145052	hypothetical protein MGC23937 similar to CG4798
MGC2477	NM_024099	hypothetical protein MGC2477
MGC2541	NM_080670	solute carrier family 35, member A4
MGC32043	NM_144582	testis expressed gene 261
MGC49942	BC040148	hypothetical protein MGC49942
MGST1	NM_145791	microsomal glutathione S-transferase 1
MLF2	NM_005439	myeloid leukemia factor 2
MLH1	NM_000249	mutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)
MPDU1	NM_004870	mannose-P-dolichol utilization defect 1
MRPS6	NM_006933	mitochondrial ribosomal protein S6
MTHFD2	NM_006636	methylene tetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohydrolase
MYL6	NM_079425	myosin, light polypeptide 6, alkali, smooth muscle and non-muscle
MYO5A	NM_000259	myosin VA (heavy polypeptide 12, myoxin)
MYRIP	NM_015460	myosin VIIA and Rab interacting protein
NDUFA4	NM_002489	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4, 9kDa
NICE-3	NM_015449	NICE-3 protein
NID67	NM_032947	putative small membrane protein NID67
NIFIE14	NM_032635	seven transmembrane domain protein
NP25	NM_013259	neuronal protein
NPR2	NM_000907	natriuretic peptide receptor B/guanylate cyclase B (atrionatriuretic peptide receptor B)

NRL	NM_006177	neural retina leucine zipper
NUCB1	NM_006184	nucleobindin 1
OLFM1	NM_014279	olfactomedin 1
OPA3	NM_025136	optic atrophy 3 (autosomal recessive, with chorea and spastic paraplegia)
OTX2	NM_021728	orthodenticle homolog 2 (Drosophila)
PCDHG	NG_000012	protocadherin gamma cluster
PCOLCE2	NM_013363	procollagen C-endopeptidase enhancer 2
PDK2	NM_002611	pyruvate dehydrogenase kinase, isoenzyme 2
PEX11B	NM_003846	peroxisomal biogenesis factor 11B
PGCP	NM_016134	plasma glutamate carboxypeptidase
PGRMC1	NM_006667	progesterone receptor membrane component 1
PIGS	NM_033198	phosphatidylinositol glycan, class S
PILB	NM_012228	pilin-like transcription factor
PIPOX	NM_016518	pipecolic acid oxidase
PITPN	NM_006224	phosphotidylinositol transfer protein
PLA2G5	NM_000929	phospholipase A2, group V
PLA2G7	NM_005084	phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)
PLEKHA1	NM_021622	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 1
PLEKHB1	NM_021200	pleckstrin homology domain containing, family B (evectins) member 1
PLU-1	NM_006618	putative DNA/chromatin binding motif
POH1	NM_005805	proteasome (prosome, macropain) 26S subunit, non-ATPase, 14
POLR2E	NM_002695	polymerase (RNA) II (DNA directed) polypeptide E, 25kDa
PPGB	NM_000308	protective protein for beta-galactosidase (galactosialidosis)
PPM1B	NM_177968	protein phosphatase 1B (formerly 2C), magnesium-dependent, beta isoform
PRDX1	NM_002574	peroxiredoxin 1
PRDX2	NM_005809	peroxiredoxin 2
PRKWNK4	NM_032387	protein kinase, lysine deficient 4
PRPSAP1	NM_002766	phosphoribosyl pyrophosphate synthetase-associated protein 1
PRSS11	NM_002775	protease, serine, 11 (IGF binding)
PTD009	NM_016146	trafficking protein particle complex 4
PTDSS1	NM_014754	phosphatidylserine synthase 1
PTPLA	NM_014241	protein tyrosine phosphatase-like (proline instead of catalytic arginine), member a
PYGO2	NM_138300	pygopus 2
RAB15	NM_198686	RAB15, member RAS oncogene family
RAB5B	NM_002868	RAB5B, member RAS oncogene family
RAB7	NM_004637	RAB7, member RAS oncogene family



RBP1	NM_002899	retinol binding protein 1, cellular
RBP4	NM_006744	retinol binding protein 4, plasma
RCV1	NM_002903	recoverin
RDH10	NM_172037	retinol dehydrogenase 10 (all-trans)
RDH12	NM_152443	retinol dehydrogenase 12 (all-trans and 9-cis)
RDH5	NM_002905	retinol dehydrogenase 5 (11-cis and 9-cis)
RDS	NM_000322	retinal degeneration, slow
REQ	NM_006268	D4, zinc and double PHD fingers family 2
RGR	NM_002921	retinal G protein coupled receptor
RHO	NM_000539	rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)
RLBP1	NM_000326	retinaldehyde binding protein 1
RNF25	NM_022453	ring finger protein 25
RODH4	NM_003708	microsomal NAD <sup>+</sup> -dependent retinol dehydrogenase 4
RPE65	NM_000329	retinal pigment epithelium-specific protein 65kDa
RPS3	NM_001005	ribosomal protein S3
RYK	NM_002958	RYK receptor-like tyrosine kinase
SACS	NM_014363	spastic ataxia of Charlevoix-Saguenay (sacsin)
SAG	NM_000541	S-antigen; retina and pineal gland (arrestin)
SARM	NM_015077	sterile alpha and TIR motif containing 1
SAT	NM_002970	spermidine/spermine N1-acetyltransferase
SCMH1	NM_012236	sex comb on midleg homolog 1 (Drosophila)
SDBCAG84	NM_198398	serologically defined breast cancer antigen 84
SDC4	NM_002999	syndecan 4 (amphiglycan, ryudocan)
SDF2	NM_006923	stromal cell-derived factor 2
SDHA	NM_004168	succinate dehydrogenase complex, subunit A, flavoprotein (Fp)
SDHB	NM_003000	succinate dehydrogenase complex, subunit B, iron sulfur (Ip)
SDHC	NM_003001	succinate dehydrogenase complex, subunit C, integral membrane protein, 15kDa
SEPT8	AF179995	septin 8
SERHL	NM_170694	serine hydrolase-like
SERPINA5	NM_000624	serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 5
SERPINF1	NM_002615	serine (or cysteine) proteinase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member
SFRP2	AF311912	secreted frizzled-related protein 2
SFRP5	NM_003015	secreted frizzled-related protein 5
SGK	NM_005627	serum/glucocorticoid regulated kinase
ShrmL	NM_020859	Shroom-related protein
SIAH2	NM_005067	seven in absentia homolog 2 (Drosophila)

SILV	NM_006928	silver homolog (mouse)
SIX3	NM_005413	sine oculis homeobox homolog 3 (Drosophila)
SKIP	XM_051221	SPHK1 (sphingosine kinase type 1) interacting protein
SLC13A3	NM_022829	solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 3
SLC16A1	NM_003051	solute carrier family 16 (monocarboxylic acid transporters), member 1
SLC1A7	NM_006671	solute carrier family 1 (glutamate transporter), member 7
SLC20A1	NM_005415	solute carrier family 20 (phosphate transporter), member 1
SLC21A14	NM_017435	solute carrier organic anion transporter family, member 1C1
SLC22A8	NM_004254	solute carrier family 22 (organic anion transporter), member 8
SLC24A1	NM_004727	solute carrier family 24 (sodium/potassium/calcium exchanger), member 1
SLC25A11	NM_003562	solute carrier family 25 (mitochondrial carrier; oxoglutarate carrier), member 11
SLC2A1	NM_006516	solute carrier family 2 (facilitated glucose transporter), member 1
SLC38A3	NM_006841	solute carrier family 38, member 3
SLC41A1	NM_173854	solute carrier family 41, member 1
SLC4A5	NM_033323	solute carrier family 4, sodium bicarbonate cotransporter, member 5
SLC6A13	NM_016615	solute carrier family 6 (neurotransmitter transporter, GABA), member 13
SLC9A3R1	NM_004252	solute carrier family 9 (sodium/hydrogen exchanger), isoform 3 regulatory factor 1
SMOC2	NM_022138	SPARC related modular calcium binding 2
SMPD1	X59960	sphingomyelin phosphodiesterase 1, acid lysosomal (acid sphingomyelinase)
SMT3H1	NM_006936	SMT3 suppressor of mif two 3 homolog 1 (yeast)
SNX5	NM_152227	sorting nexin 5
SPOCK	NM_004598	sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican)
SPTAN1	NM_003127	spectrin, alpha, non-erythrocytic 1 (alpha-fodrin)
SRC	NM_005417	v-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
SRRM2	NM_016333	serine/arginine repetitive matrix 2
SSBP2	NM_012446	single-stranded DNA binding protein 2
STAU	NM_017453	staufer, RNA binding protein (Drosophila)
STEAP2	NM_152999	six transmembrane epithelial antigen of prostate 2
STUB1	NM_005861	STIP1 homology and U-Box containing protein 1
STXBP1	NM_003165	syntaxin binding protein 1
SUOX	NM_000456	sulfite oxidase
SURB7	NM_004264	SRB7 suppressor of RNA polymerase B homolog (yeast)
TCTA	NM_022171	T-cell leukemia translocation altered gene
TCTEL1	NM_006519	t-complex-associated-testis-expressed 1-like 1
TEGT	NM_003217	testis enhanced gene transcript (BAX inhibitor 1)
TGFB1	NM_000358	transforming growth factor, beta-induced, 68kDa

TIMP2	NM_003255	tissue inhibitor of metalloproteinase 2
TIMP3	NM_000362	tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory)
TM4SF2	NM_004615	transmembrane 4 superfamily member 2
TM9SF1	NM_006405	transmembrane 9 superfamily member 1
TNRC15	NM_015575	trinucleotide repeat containing 15
TPI1	NM_000365	triosephosphate isomerase 1
TPK1	NM_022445	thiamin pyrophosphokinase 1
TRIM41	NM_033549	tripartite motif-containing 41
TRPM1	NM_002420	transient receptor potential cation channel, subfamily M, member 1
TRPM3	NM_020952	transient receptor potential cation channel, subfamily M, member 3
TSC22	NM_006022	transforming growth factor beta-stimulated protein TSC-22
TSPAN-3	NM_005724	transmembrane 4 superfamily member 8
TTR	NM_000371	transthyretin (prealbumin, amyloidosis type I)
TUBG1	NM_001070	tubulin, gamma 1
TYRP1	NM_000550	tyrosinase-related protein 1
UBE1	NM_003334	ubiquitin-activating enzyme E1 (A1S9T and BN75 temperature sensitivity complementing)
UBE2M	NM_003969	ubiquitin-conjugating enzyme E2M (UBC12 homolog, yeast)
UBL5	NM_024292	ubiquitin-like 5
UNC119	NM_054035	unc-119 homolog (C. elegans)
VEGF	NM_003376	vascular endothelial growth factor
VMD2	NM_004183	vitelliform macular dystrophy (Best disease, bestrophin)
WBP1	NM_012477	WW domain binding protein 1
XT3	NM_020208	X transporter protein 3

**Supplemental Table 3.** Partial list of 15 photoreceptor genes and their presence in hRET-SSH and bRPE-SSH cDNA libraries

<b>Gene symbol</b>	<b>GenBank acc.no.</b>	<b>Gene name</b>
CNGA1	NM_000087	cyclic nucleotide gated channel alpha 1
CNGB1	NM_001297	cyclic nucleotide gated channel beta 1
GNAT1	NM_144499	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1
GNB1	NM_002074	cyclic nucleotide gated channel beta 1
GNGT1	NM_021955	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1
GUCA1A	BX647537	guanylate cyclase activator 1A (retina)
PDE6A	NM_000440	phosphodiesterase 6A, cGMP-specific, rod, alpha
PDE6B	NM_000283	phosphodiesterase 6B, cGMP-specific, rod, beta (congenital stationary night blindness 3, autosomal dominant)
PDE6G	NM_002602	phosphodiesterase 6G, cGMP-specific, rod, gamma
RCV1	NM_002903	recoverin
RDS	NM_000322	retinal degeneration, slow
RHO	NM_000539	rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)
ROM1	NM_000327	retinal outer segment membrane protein 1
SAG	NM_000541	S-antigen; retina and pineal gland (arrestin)
SLC24A1	NM_004727	solute carrier family 24 (sodium/potassium/calcium exchanger), member 1

**hRET-SSH**    **bRPE-SSH**

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**Supplemental Table 4.**

Partial list of genes involved in vitamin A cycle and phototransduction pathway and their presence in hRET-SSH and bRPE-SSH cDNA libraries

<b>Gene symbol</b>	<b>GenBank acc. no.</b>	<b>Gene name</b>
ABCA4	NM_000350	ATP-binding cassette, sub-family A (ABC1), member 4
ALDH1A1	NM_000689	aldehyde dehydrogenase 1 family, member A1
ALDH1A2	NM_003888	aldehyde dehydrogenase 1 family, member A2
ARR3	NM_004312	arrestin 3, retinal (X-arrestin)
BCDO1	NM_017429	beta-carotene 15, 15'-dioxygenase
CACNA1F	NM_005183	calcium channel, voltage-dependent, alpha 1F subunit
CNGA1	NM_000087	cyclic nucleotide gated channel alpha 1
CNGA3	NM_001298	cyclic nucleotide gated channel alpha 3
CNGB1	NM_001297	cyclic nucleotide gated channel beta 1
CNGB3	NM_019098	cyclic nucleotide gated channel beta 3
CRABP1	NM_004378	cellular retinoic acid binding protein 1
CRABP2	NM_001878	cellular retinoic acid binding protein 2
GNAT1	NM_144499	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1
GNAT2	NM_005272	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 2
GNGT1	NM_021955	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1
GNGT2	NM_031498	guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2
GPRK7	NM_139209	G protein-coupled receptor kinase 7
GUCA1A	BX647537	guanylate cyclase activator 1A (retina)
GUCA1B	NM_002098	guanylate cyclase activator 1B (retina)
GUCA1C	BM685830	guanylate cyclase activator 1C
GUCY2D	NM_000180	guanylate cyclase 2D, membrane (retina-specific)
GUCY2F	NM_001522	guanylate cyclase 2F, retinal
LRAT	NM_004744	lecithin retinol acyltransferase (phosphatidylcholine--retinol O-acyltransferase)
NCALD	NM_032041	neurocalcin delta
OPN1LW	NM_020061	opsin 1 (cone pigments), long-wave-sensitive (color blindness, protan)
OPN1MW	NM_000513	opsin 1 (cone pigments), medium-wave-sensitive (color blindness, deutan)
OPN1SW	NM_001708	opsin 1 (cone pigments), short-wave-sensitive (color blindness, tritan)
PDC	NM_002597	phosducin
PDE6A	NM_000440	phosphodiesterase 6A, cGMP-specific, rod, alpha
PDE6B	NM_000283	phosphodiesterase 6B, cGMP-specific, rod, beta (congenital stationary night blindness 3, autosomal dominant)
PDE6C	NM_006204	phosphodiesterase 6C, cGMP-specific, cone, alpha prime
PDE6D	NM_002601	phosphodiesterase 6D, cGMP-specific, rod, delta

PDE6G	NM_002602	phosphodiesterase 6G, cGMP-specific, rod, gamma
PDE6H	NM_006205	phosphodiesterase 6H, cGMP-specific, cone, gamma
RARA	NM_000964	retinoic acid receptor, alpha
RARB	NM_000965	retinoic acid receptor, beta
RARG	NM_000966	retinoic acid receptor, gamma
RBP1	NM_002899	retinol binding protein 1, cellular
RBP3	NM_002900	retinol binding protein 3, interstitial
RBP4	NM_006744	retinol binding protein 4, plasma
RCV1	NM_002903	recoverin
RDH10	NM_172037	retinol dehydrogenase 10 (all-trans)
RDH12	NM_152443	retinol dehydrogenase 12 (all-trans and 9-cis)
RDH5	NM_002905	retinol dehydrogenase 5 (11-cis and 9-cis)
RDH8	NM_015725	retinol dehydrogenase 8 (all-trans)
RGR	NM_002921	retinal G protein coupled receptor
RGS11	NM_003834	regulator of G-protein signalling 11
RGS16	NM_002928	regulator of G-protein signalling 16
RGS9	NM_003835	regulator of G-protein signalling 9
RHO	NM_000539	rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)
RHOK	NM_002929	rhodopsin kinase
RLBP1	NM_000326	retinaldehyde binding protein 1
RPE65	NM_000329	retinal pigment epithelium-specific protein 65kDa
SAG	NM_000541	S-antigen; retina and pineal gland (arrestin)
SLC24A1	NM_004727	solute carrier family 24 (sodium/potassium/calcium exchanger), member 1
SLC25A18	NM_031481	solute carrier family 25, (mitochondrial carrier), member 18
SLC25A22	NM_024698	solute carrier family 25 (mitochondrial carrier: glutamate), member 22

<b>hRET-SSH</b>	<b>brPE-SSH</b>
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**Supplemental Table 5.**Partial list of genes involved in retinal disorders  
and their presence in the hRET-SSH and bRPE-SSH cDNA libraries

<b>Gene symbol</b>	<b>GenBank acc.no.</b>	<b>Gene name</b>	<b>hRET-SSH</b>
ABCA4	NM_000350	ATP-binding cassette, sub-family A (ABC1), member 4	√
ABCC6	NM_001171	ATP-binding cassette, sub-family C (CFTR/MRP), member 6	
AIPL1	NM_014336	aryl hydrocarbon receptor interacting protein-like 1	
ALMS1	NM_015120	Alstrom syndrome 1	
BBS1	NM_024649	Bardet-Biedl syndrome 1	
BBS2	NM_031885	Bardet-Biedl syndrome 2	
BBS4	NM_033028	Bardet-Biedl syndrome 4	√
BBS7	NM_176824	Bardet-Biedl syndrome 7	
C1QTNF5	NM_015645	C1q and tumor necrosis factor related protein 5	
CACNA1F	NM_005183	calcium channel, voltage-dependent, alpha 1F subunit	
CDH23	NM_022124	cadherin related 23	
CDH3	NM_001793	cadherin 3, type 1, P-cadherin (placental)	
CHM	NM_000390	choroideremia (Rab escort protein 1)	
CLN3	NM_000086	ceroid-lipofuscinosis, neuronal 3, juvenile (Batten, Spielmeyer-Vogt disease)	
CNGA1	NM_000087	cyclic nucleotide gated channel alpha 1	√
CNGA3	NM_001298	cyclic nucleotide gated channel alpha 3	
CNGB1	NM_001297	cyclic nucleotide gated channel beta 1	√
CNGB3	NM_019098	cyclic nucleotide gated channel beta 3	
COL11A1	NM_080629	collagen, type XI, alpha 1	
COL2A1	NM_001844	collagen, type II, alpha 1 (primary osteoarthritis, spondyloepiphyseal dysplasia, congenital)	
CRB1	NM_012076	crumbs homolog 1 (Drosophila)	
CRX	NM_000554	cone-rod homeobox	
DMD	NM_004023	dystrophin	√
EFEMP1	NM_004105	EGF-containing fibulin-like extracellular matrix protein 1	
ELOVL4	NM_022726	elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 4	√
FSCN2	NM_012418	fascin homolog 2, actin-bundling protein, retinal (Strongylocentrotus purpuratus)	
FZD4	NM_012193	frizzled homolog 4 (Drosophila)	
GNAT1	NM_144499	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 1	√
GNAT2	NM_005272	guanine nucleotide binding protein (G protein), alpha transducing activity polypeptide 2	√
GUCA1A	BX647537	guanylate cyclase activator 1A (retina)	
GUCY2D	NM_000180	guanylate cyclase 2D, membrane (retina-specific)	√
HPRP3	NM_004698	PRP3 pre-mRNA processing factor 3 homolog (yeast)	

IMPDH1	NM_000883	IMP (inosine monophosphate) dehydrogenase 1	
JAG1	NM_000214	jagged 1 (Alagille syndrome)	
KSS	-	Kearns-Sayre syndrome	
LHON	-	Leber optic neuropathy	
LRAT	NM_004744	lecithin retinol acyltransferase (phosphatidylcholine--retinol O-acyltransferase)	
MERTK	NM_006343	c-mer proto-oncogene tyrosine kinase	
MKKS	NM_018848	McKusick-Kaufman syndrome	
MTATP6	NM_173702	ATP synthase 6	
MTP	NM_000253	microsomal triglyceride transfer protein (large polypeptide, 88kDa)	
MTTH	-	tRNA histidine	
MTTL1	-	tRNA leucine 1 (UUA/G)	
MTTS2	-	tRNA serine 2 (AGU/C)	
MYO7A	NM_000260	myosin VIIA (Usher syndrome 1B (autosomal recessive, severe))	
NDP	NM_000266	Norrie disease (pseudoglioma)	
NR2E3	NM_016346	nuclear receptor subfamily 2, group E, member 3	√
NRL	NM_006177	neural retina leucine zipper	√
NYX	NM_022567	nyctalopin	
OAT	NM_000274	ornithine aminotransferase (gyrate atrophy)	
OPA1	NM_130837	optic atrophy 1 (autosomal dominant)	
OPA3	NM_025136	optic atrophy 3 (autosomal recessive, with chorea and spastic paraplegia)	
OPN1LW	NM_020061	opsin 1 (cone pigments), long-wave-sensitive (color blindness, protan)	
OPN1MW	NM_000513	opsin 1 (cone pigments), medium-wave-sensitive (color blindness, deutan)	
OPN1SW	NM_001708	opsin 1 (cone pigments), short-wave-sensitive (color blindness, tritan)	√
PAX2	NM_003988	paired box gene 2	
PCDH15	NM_033056	protocadherin 15	
PDE6A	NM_000440	phosphodiesterase 6A, cGMP-specific, rod, alpha	√
PDE6B	NM_000283	phosphodiesterase 6B, cGMP-specific, rod, beta	
PEX1	NM_000466	peroxisome biogenesis factor 1	
PGK1	NM_000291	phosphoglycerate kinase 1	
PHYH	NM_006214	phytanoyl-CoA hydroxylase (Refsum disease)	
PROM1	NM_006017	prominin 1	√
PRPF31	AY040822	PRP31 pre-mRNA processing factor 31 homolog (yeast)	
PRPF8	NM_006445	PRP8 pre-mRNA processing factor 8 homolog (yeast)	
RB1	NM_000321	retinoblastoma 1 (including osteosarcoma)	
RBP4	NM_006744	retinol binding protein 4, plasma	
RDH5	NM_002905	retinol dehydrogenase 5 (11-cis and 9-cis)	

RDS	NM_000322	retinal degeneration, slow	√
RGR	NM_002921	retinal G protein coupled receptor	
RHO	NM_000539	rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)	√
RHOK	NM_002929	rhodopsin kinase	
RIMS1	NM_014989	regulating synaptic membrane exocytosis 1	
RLBP1	NM_000326	retinaldehyde binding protein 1	
ROM1	NM_000327	retinal outer segment membrane protein 1	√
RP1	NM_006269	retinitis pigmentosa 1 (autosomal dominant)	√
RP2	NM_006915	retinitis pigmentosa 2 (X-linked recessive)	
RP9	NM_203288	retinitis pigmentosa 9 (autosomal dominant)	
RPE65	NM_000329	retinal pigment epithelium-specific protein 65kDa	√
RPGR	NM_000328	retinitis pigmentosa GTPase regulator	
RPGRIP1	NM_020366	retinitis pigmentosa GTPase regulator interacting protein 1	
RS1	NM_000330	retinoschisis (X-linked, juvenile) 1	
SAG	NM_000541	S-antigen; retina and pineal gland (arrestin)	√
SCA7	NM_000333	spinocerebellar ataxia 7 (olivopontocerebellar atrophy with retinal degeneration)	
TIMM8A	NM_004085	translocase of inner mitochondrial membrane 8 homolog A (yeast)	
TIMP3	NM_000362	tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory)	
TTC8	NM_144596	tetratricopeptide repeat domain 8	
TTPA	NM_000370	tocopherol (alpha) transfer protein (ataxia (Friedreich-like) with vitamin E deficiency)	
TULP1	NM_003322	tubby like protein 1	
UNC119	NM_054035	unc-119 homolog (C. elegans)	
USH1C	NM_005709	Usher syndrome 1C (autosomal recessive, severe)	
USH1G	NM_173477	Usher syndrome 1G (autosomal recessive)	
USH2A	NM_007123	Usher syndrome 2A (autosomal recessive, mild)	
USH3A	NM_174878	Usher syndrome 3A	
VMD2	NM_004183	vitelliform macular dystrophy (Best disease, bestrophin)	
WFS1	NM_006005	Wolfram syndrome 1 (wolframin)	

**bRPE-SSH**

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