

**Supplemental Table S1:** List of genes composing the four NGS panels used

Lille panel (156 IRD genes)	Lille panel (208 IRD genes)	Strasbourg panel (266 IRD genes)	Institut de la Vision panel (124 IRD genes)
ABCA4	ABCA4	ABCA4	ABCA4
ADAM9	ABDH12	ABCC6	ADAM9
AIPL1	ADAM9	ABHD12	AIPL1
ARL2BP	ADAMTS18	ACBD5	ARL6
ARL6	ADIPOR1	ADAM9	ASTN2
BBS1	AGBL5	ADAMTS18	ATXN7
BBS2	AHI1	ADGRV1	BBS1
BBS12	AHR	AHI1	BBS10
BBS7	AIPL1	AIPL1	BBS12
BEST1	ALMS1	ALMS1	BBS2
C12orf65	ARHGEF18	AMACR	BBS4
C1QTNF5	ARL2BP	ANKS6	BBS5
C21orf2	ARL3	ARL13B	BBS7
C2orf71	ARL6	ARL2BP	BBS9
C2orf86	ASRGL1	ARL3	BEST1
C8orf37	ATF6	ARL6	C1QTNF5
CA4	ATXN7	ATXN7	C2orf71
CABP4	BBS1	B9D1	C8orf37
CACNA1F	BBS10	B9D2	CA4
CACNA2D4	BBS12	BBIP1	CABP4
CAPN5	BBS2	BBS1	CACNA2D4
CDH23	BEST1	BBS10	CC2D2A
CDH3	C12orf65	BBS12	CDH23
CDHR1	C1QTNF5	BBS2	CDHR1
CERKL	C21orf2	BBS4	CEP290
CEP290	C2orf71	BBS5	CERKL
CHM	C8orf37	BBS7	CHM
CLRN1	CA4	BBS9	CLN3
CNGA1	CABP4	BEST1	CLRN1
CNGA3	CACNA1F	C12orf65	CNGA1
CNGB1	CACNA2D4	C1QTNF5	CNGB1
CNGB3	CAPN5	C21orf2	CRB1
CNNM4	CC2D2A	C2orf71	CRX
CRB1	CCT2	C5orf42	CYP4V2
CRX	CDH3	C8orf37	DFNB31
CTNNA1	CDHR1	CA4	DHDDS
CYP4V2	CERKL	CABP4	EYS
DFNB31	CEP164	CACNA1F	FAM161A
DHDDS	CEP250	CACNA2D4	FLVCR1
DHX38	CEP78	CAPN5	FSCN2
DRAM2	CEP290	CC2D2A	GNPTG
EFEMP1	CFH	CCDC28B	GPR98

ELOVL4	CHM	CDH23	GUCA1A
EMC1	CLCC1	CDH3	GUCA1B
EYS	CLN3	CDHR1	GUCY2D
FAM161A	CLRN1	CEP164	IDH3B
FLVCR1	CLUAP1	CEP250	IMPDH1
FSCN2	CNGA1	CEP290	IMPG2
FZD4	CNGA3	CEP41	INVS
GNAT1	CNGB1	CEP83	IQCB1
GNAT2	CNGB3	CERKL	KCNJ13
GRP125	CNNM4	CHM	KLHL7
GRP179	COL4A5	CIB2	LCA5
GRP98	CRB1	CLN3	LRAT
GRK1	CRX	CLN5	LZTFL1
GRM6	CSPP1	CLN6	MAK
GUCA1A	CTNNA1	CLN8	MERTK
GUCA1B	CYP4V2	CLRN1	MFRP
GUCA2A	DHDDS	CNGA1	MKKS
GUCY2D	DHX38	CNGA3	MKS1
HK1	DRAM2	CNGB1	MYO7A
IDH3B	DTHD1	CNGB3	NMNAT1
IMPDH1	EFEMP1	CNNM4	NPHP1
IMPG1	ELOVL4	CRB1	NPHP3
IMPG2	EMC1	CRX	NPHP4
IQCB1	EYS	CSPP1	NR2E3
ITM2B	FAM161A	CTSD	NRL
KCNJ13	FLVCR1	CYP4V2	OAT
KCNV2	FSCN2	DCDC2	OFD1
KIAA1549	GDF6	DFNB31	OTX2
KIZ	GNAT1	DHDDS	PAF1
KLHL7	GNAT2	DHX38	PANK2
LCA5	GNB3	DMD	PCDH15
LRAT	GRP125	DNAJC5	PDE6A
LRIT3	GRP179	DRAM2	PDE6B
LRP5	GRK1	DTHD1	PDE6C
MAK	GRM6	EFEMP1	PDE6G
MERTK	GUCA1A	ELOVL4	PDZD7
MFRP	GUCA1B	EMC1	PEX1
MFSD8	GUCY2D	ERCC1	PEX7
MVK	HGSNAT	ERCC2	PHYH
MYO7A	HK1	ERCC3	PITPNM3
NDP	HMCN1	ERCC4	PRCD
NEK2	IDH3B	ERCC5	PROM1
NMNAT1	IFT140	ERCC6	PRPF3
NR2E3	IFT172	ERCC8	PRPF31
NRL	IFT81	EYS	PRPF6
NYX	IMPDH1	FAM161A	PRPF8

OAT	IMPG1	FIZ1	PRPH2
OFD1	IMPG2	FLVCR1	RAX2
OPN1LW	INPP5E	FSCN2	RBP3
OPN1MW	IQCB1	FZD4	RBP4
OPN1SW	ITM2B	GDF6	RD3
OTX2	JAG1	GLIS2	RDH12
PCDH15	KCNJ13	GNAT1	RDH5
PDE6A	KCNV2	GNAT2	RGR
PDE6B	KIAA1549	GNPTG	RHO
PDE6C	KIF11	GPR125	RIMS1
PDE6G	KIZ	GPR179	RLBP1
PDE6H	KLHL7	GRK1	ROM1
PDZD7	LAMA1	GRM6	RP1
PGK1	LCA5	GRN	RP2
PITPNM3	LRAT	GUCA1A	RP9
PLA2G5	LRIT3	GUCA1B	RPE65
PRCD	LRP5	GUCY2D	RPGR
PROM1	MAK	HARS	RPGRIP1
PRPF3	MAPKPK3	HGSNAT	RPGRIP1L
PRPF31	MERTK	HK1	SAG
PRPF4	MFRP	HMX1	SEMA4A
PRPF6	MFSD8	IDH3B	SNRNP200
PRPF8	MVK	IFT122	SPATA7
PRPH2	NDP	IFT140	TMEM237
RAB28	NEK2	IFT172	TOPORS
RAX2	NEUROD1	IFT27	TRIM32
RB1	NMNAT1	IFT80	TTC8
RBP3	NPHP1	IFT88	TTLL5
RBP4	NPHP10	IMPDH1	TPPA
RD3	NPHP2	IMPG1	TULP1
RDH12	NPHP3	IMPG2	UNC119
RDH5	NPHP4	INPP5E	USH1C
RGR	NR2E3	INVS	USH1G
RGS9	NRL	IQCB1	USH2A
RGS9BP	NYX	ITM2B	WDPCP
RHO	OAT	KCNJ13	ZNF513
RIMS1	OFD1	KCNV2	
RLBP1	OPN1LW	KIAA1549	
ROM1	OPN1MW	KIF11	
RP1	OPN1SW	KIF5A	
RP1L1	OTX2	KIF7	
RP2	PDE6A	KIZ	
RP9	PDE6B	KLHL7	
RPE65	PDE6C	LAMA1	
RPGRP	PDE6G	LCA5	
RPGRIP1	PDE6H	LRAT	

RS1	PDZD7	LRIT3
SAG	PEX1	LRP5
SEMA4A	PEX6	LZTFL1
SLC24A1	PEX26	MAK
SLC7A14	PEX7	MERTK
SNRNP200	PGK1	MFRP
SPATA7	PHYH	MFSD8
TEAD1	PITPNM3	MIR204
TIMP3	PLA2G5	MKKS
TMEM67	POC1B	MKS1
TOPORS	POMGNT1	MVK
TRIM32	PRCD	MYO7A
TRPM1	PRDM13	NDP
TSPAN12	PROM1	NEK2
TTC8	PRPF3	NEK8
TLL5	PRPF31	NEUROD1
TULP1	PRPF4	NMNAT1
UNC119	PRPF6	NPHP1
USH1C	PRPF8	NPHP3
USH2A	PRPH2	NPHP4
VCAN	PYGM	NR2E3
ZNF513	RAB28	NR2F1
	RAX2	NRL
	RBP3	NYX
	RBP4	OAT
	RCBTB1	OFD1
	RD3	OPN1LW
	RDH11	OPN1MW
	RDH12	OPN1SW
	RDH5	OR2W3
	REEP6	OTX2
	RGR	PANK2
	RGS9	PAX2
	RGS9BP	PCDH15
	RHO	PCYT1A
	RIMS1	PDE6A
	RLBP1	PDE6B
	ROM1	PDE6C
	RP1	PDE6D
	RP1L1	PDE6G
	RP2	PDE6H
	RP9	PDZD7
	RPE65	PEX1
	RPGRP	PEX10
	RPGRIP1	PEX14
	RS1	PEX16

SAG	PEX19
SAMD11	PEX2
SEMA4A	PEX5
SLC24A1	PEX7
SLC7A14	PGK1
SNRNP200	PHYH
SPATA7	PITPNM3
SPP2	PLA2G5
TIMP3	PLK4
TMEM216	PNPLA6
TOPORS	POC1B
TRNT1	PPT1
TRPM1	PRCD
TSPAN12	PROM1
TTC8	PRPF3
TTL5	PRPF31
TUB	PRPF4
TUBGCP4	PRPF6
TUBGCP6	PRPF8
TULP1	PRPH2
UNC119	RAB28
USH2A	RBP3
VCAN	RBP4
VPS13B	RD3
WDR19	RDH11
ZNF408	RDH12
ZNF423	RDH5
ZNF513	RGR
	RGS9
	RGS9BP
	RHO
	RIMS1
	RLBP1
	ROM1
	RP1
	RP1L1
	RP2
	RP9
	RPE65
	RPGR
	RPGRIP1
	RPGRIP1L
	RS1
	SAG
	SDCCAG8
	SEMA4A

SLC19A2  
SLC24A1  
SLC7A14  
SNRNP200  
SPATA7  
SRPX  
TCTN1  
TCTN2  
TCTN3  
TIMP3  
TMEM216  
TMEM231  
TMEM237  
TMEM238  
TMEM67  
TOPORS  
TRIM32  
TRPM1  
TSPAN12  
TTC21B  
TTC8  
TTLL5  
TPPA  
TUB  
TUBGCP4  
TULP1  
UNC119  
USH1C  
USH1G  
USH2A  
VCAN  
VPS13B  
WDPCP  
WDR19  
WDR34  
WDR35  
XPNPEP3  
ZNF408  
ZNF423  
ZNF513