

# Gen-Panels Augenerkrankungen

LI

## Hinweise:

- Gen-Panels mit mehr als 10 Genen dürfen gemäss Analysenliste des BAG nur durch Ärzte mit einem FMH-Titel Medizinische Genetik verordnet werden.
- Die Gen-Panels sind nicht endgültig und können je nach Fragestellung auf Wunsch angepasst werden.
- Die Gen-Panels können abhängig von der aktuellen Datenlage zum Zeitpunkt der Analysen von denjenigen auf dieser Liste abweichen.

## Achromatopsie v1 (6 Gene)

*ATF6, CNGA3, CNGB3, GNAT2, PDE6C, PDE6H*

## Anterior segment dysgenesis v2 (179 Gene)

*ABCB6, ABHD12, ACTB, ADAMTS10, ADAMTS17, ADAMTSL4, AGL1, AGK, ALDH1A3, ASPH, ATOH7, B3GLCT, BCOR, BEST1, BFSP1, BFSP2, BMP4, C12orf57, C2CD3, CC2D2A, CHD7, CHMP4B, CHRDL1, CHST6, CLDN19, CLPB, COL17A1, COL18A1, COL4A1, COL5A1, COL8A2, CPAMD8, CRYAA, CRYAB, CRYBA1, CRYBA4, CRYBB1, CRYBB2, CRYBB3, CRYGA, CRYGB, CRYGC, CRYGD, CRYGS, CTDP1, CYP1B1, CYP27A1, CYP4V2, DCN, EPG5, EPHA2, EYA1, FAM111A, FAM126A, FGF5, FOXC1, FOXE3, FRAS1, FREM1, FREM2, FTL, FYCO1, GALK1, GALT, GCNT2, GDF3, GDF6, GJA1, GJA3, GJA8, GLI2, GRHL2, GRIP1, GSN, HCCS, HDAC6, HMGB3, HMX1, HSF4, IGBP1, INPP5E, IRX5, KIF11, KRT12, KRT3, LCAT, LGR4, LIM2, LOXHD1, LOXL1, LRP2, LTBP2, MAB21L2, MAF, MASP1, MEF2C, MFRP, MIP, MIR184, MITF, MPDZ, MYOC, NAA10, NDP, NHS, NMNAT1, OCRL, OPA3, OSGEP, OTX2, P3H2, PAX2, PAX3, PAX6, PDGFRB, PEX7, PIGL, PIKFYVE, PITX2, PITX3, POMGNT1, POMT1, PORCN, PQBP1, PRDM5, PRSS56, PUF60, PXDN, RAB3GAP1, RARB, RAX, RAX2, RBP4, RECQL4, RRGRI1L, SALL2, SALL4, SEMA3E, SH3PXD2B, SHH, SIL1, SIPA1L3, SIX3, SIX6, SLC16A12, SLC38A8, SLC4A11, SMCHD1, SMG9, SMO, SMOC1, SOX2, SRD5A3, STRA6, TACSTD2, TBX1, TCF4, TDRD7, TENM3, TFAP2A, TGFBI, TMEM67, TMEM98, TMX3, UBIAD1, VAX1, VAX2, VIM, VPS13B, VSX1, VSX2, WASHC5, WDR37, WRN, YAP1, ZEB1, ZEB2, ZIC2, ZNF469*

## Cornea-Dystrophie v1 (27 Gene)

*AGL1, CHST6, COL17A1, COL5A1, COL8A2, CYP4V2, DCN, FOXE3, GJA8, GRHL2, GSN, KRT12, KRT3, LCAT, LOXHD1, MAF, PIKFYVE, PITX2, PRDM5, SLC4A11, TACSTD2, TCF4, TGFBI, UBIAD1, VSX1, ZEB1, ZNF469*

## Hermansky-Pudlak-Syndrom v1 (9 Gene)

*AP3B1, BLOC1S3, BLOC1S6, DTNBP1, HPS1, HPS3, HPS4, HPS5, HPS6*

## Katarakte v2 (61 Gene)

*ABHD12, AGK, BCOR, BFSP1, BFSP2, CHMP4B, CLPB, COL4A1, CRYAA, CRYAB, CRYBA1, CRYBA2, CRYBA4, CRYBB1, CRYBB2, CRYBB3, CRYGA, CRYGB, CRYGC, CRYGD, CRYGS, CTDP1, CYP27A1, CYP51A1, EPG5, EPHA2, EYA1, FAM126A, FOXE3, FTL, FYCO1, GALK1, GALT, GCNT2, GJA3, GJA8, HSF4, LEMD2, LIM2, LSS, MAF, MIP, MIR184, NDP, NHS, OCRL, OPA3, P3H2, PAX6, PEX7, PITX3, PXDN, RAB3GAP1, RECQL4, SIL1, SIPA1L3, SLC16A12, TDRD7, VIM, VSX2, WRN*

## Kongenitale stationäre Nachtblindheit (CSNB) v1 (15 Gene)

*CABP4, CACNA1F, GNAT1, GNB3, GPR179, GRK1, GRM6, LRIT3, NYX, PDE6B, RHO, RIMS2, SAG, SLC24A1, TRPM1*

**Lebersche kongenitale Amaurose (LCA) v2 (27 Gene)**

*AIPL1, BCOR, CABP4, CCT2, CEP290, CLUAP1, CRB1, CRX, DTHD1, GDF6, GUCY2D, IFT140, IMPDH1, IQCB1, KCNJ13, LCA5, LRAT, NMNAT1, OTX2, PRPH2, RD3, RDH12, RPE65, RPGRIP1, SLC6A6, SPATA7, TULP1*

**Makuladegeneration, altersbedingt (AMD) v1 (10 Gene)**

*ARMS2, C2, C3, CFB, CFH, ERCC6, FBLN5, HTRA1, TLR3, TLR4*

**Makuladystrophie, umfassendes Panel v1 (49 Gene)**

*ABCA4, ACBD5, ADAM9, AIPL1, ATXN7, BEST1, C1QTNF5, C8orf37, CABP4, CACNA1F, CACNA2D4, CDH3, CDHR1, CEP78, CERKL, CFAP410, CNNM4, CRX, CTNNA1, DRAM2, EFEMP1, ELOVL4, GUCA1A, GUCA1B, GUCY2D, HMCN1, IFT81, IMPG1, IMPG2, KCNV2, MFSD8, OPN1LW, OPN1MW, OTX2, PCYT1A, PDE6C, PITPNM3, POC1B, PRDM13, PROM1, PRPH2, RAB28, RAX2, RDH5, RIMS1, RPGRIP1, SEMA4A, TTLL5, UNC119*

**Makuladystrophie, autosomal rezessiv v1 (29 Gene)**

*ABCA4, ACBD5, ADAM9, BEST1, C8orf37, CABP4, CACNA1F, CACNA2D4, CDH3, CDHR1, CEP78, CERKL, CFAP410, CNNM4, DRAM2, IFT81, IMPG1, KCNV2, MFSD8, PCYT1A, PDE6C, POC1B, PROM1, PRPH2, RAB28, RAX2, RDH5, RPGRIP1, TTLL5*

**Makuladystrophie, autosomal dominant v1 (22 Gene)**

*AIPL1, ATXN7, BEST1, C1QTNF5, CRX, CTNNA1, EFEMP1, ELOVL4, GUCA1A, GUCA1B, GUCY2D, HMCN1, IMPG1, IMPG2, OTX2, PITPNM3, PRDM13, PRPH2, RAX2, RIMS1, SEMA4A, UNC119*

**Okulärer Albinismus v1 (9 Gene)**

*GPR143, LRMDA, LYST, MC1R, OCA2, SLC24A5, SLC45A2, TYR, TYRP1*

**Optikusatrophie / Ophthalmoparese v2 (56 Gene)**

*ACO2, AFG3L2, AUH, CISD2, CLPB, DGUOK, DNA2, DNAJC19, DNM1L, EARS2, ELOVL1, FDXR, FH, GYG2, ISCA2, MFF, MFN2, MGME1, MIEF1, MMP19, MTFMT, MTO1, MTPAP, MTRFR, NARS2, NBAS, NDUFAF3, NDUFS1, NR2F1, OPA1, OPA3, PAX2, PDHX, PDSS1, POLG, POLG2, PRPS1, RNASEH1, RRM2B, RTN4IP1, SLC19A2, SLC19A3, SLC25A4, SLC25A46, SNX10, SPG7, SUCLA2, TACO1, TIMM8A, TK2, TMEM126A, TSFM, TWNK, TYMP, VARS2, WFS1*

**Optikusneuropathie ohne mtDNA v2**

*ACO2, AFG3L2, ANTXR1, ATOH7, ATP1A3, CISD2, DNAJC30, DNM1L, FA2H, FDXR, HMBS, MFF, MFN2, MIEF1, MTPAP, MTRFR, NBAS, NDUFAF5, NDUFS2, NR2F1, OPA1, OPA3, PAX2, PRPS1, RTN4IP1, SLC25A46, SPG7, SSBP1, TBCE, TIMM8A, TMEM126A, UCHL1, WFS1, YME1L1*

**Peters-Anomalie v1 (7 Gene)**

*B3GLCT, CYP1B1, FOXC1, FOXE3, PAX6, PITX2, PITX3*

### Retinadystrophien v3 (292 Gene)

ABCA4, ABCC6, ABHD12, ACBD5, ACO2, ADAM9, ADAMTS18, ADGRA3, ADGRV1, ADIPOR1, AFG3L2, AGBL5, AHI1, AHR, AIPL1, AIRE, ALMS1, ARHGEF18, ARL2BP, ARL3, ARL6, ARMS2, ARSG, ASRGL1, ATF6, ATOH7, ATXN7, BBIP1, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, BCOR, BEST1, C1QTNF5, C2, C3, C8orf37, CA4, CABP4, CACNA1F, CACNA2D4, CAPN5, CC2D2A, CCDC28B, CCT2, CDH23, CDH3, CDHR1, CEP164, CEP19, CEP250, CEP290, CEP78, CERKL, CFAP410, CFB, CFH, CHM, CIB2, CLCC1, CLN3, CLRN1, CLUAP1, CNGA1, CNGA3, CNGB1, CNGB3, CNNM4, COL11A1, COL11A2, COL18A1, COL2A1, COL9A1, COL9A2, COL9A3, CRB1, CRX, CSPP1, CTC1, CTNNA1, CTNNA1, CYP4V2, DHDDS, DHX38, DMD, DRAM2, DTHD1, EFEMP1, ELOVL1, ELOVL4, EMC1, ERCC6, ESPN, EXOSC2, EYS, FAM161A, FBLN5, FLVCR1, FRMD5, FSCN2, FZD4, GDF6, GNAT1, GNAT2, GNB3, GNPTG, GPR179, GRK1, GRM6, GUCA1A, GUCA1B, GUCY2D, HARS1, HGSNAT, HK1, HMCN1, HMX1, HTRA1, IDH3B, IFT140, IFT172, IFT27, IFT81, IMPDH1, IMPG1, IMPG2, INPP5E, INVS, IQCB1, ITM2B, JAG1, KCNJ13, KCNV2, KIAA1549, KIF11, KIZ, KLHL7, LAMA1, LCA5, LRAT, LRIT3, LRP5, LZTFL1, MAK, MAPKAPK3, MERTK, MFN2, MFRP, MFSD8, MIR204, MKKS, MKS1, MMP19, MTRFR, MTPP, MVK, MYO7A, NBAS, NDP, NEK2, NEUROD1, NMNAT1, NPHP1, NPHP3, NPHP4, NR2E3, NR2F1, NRL, NYX, OAT, OFD1, OPA1, OPA3, OPN1LW, OPN1MW, OPN1SW, OTX2, PANK2, PAX2, PAX6, PCARE, PCDH15, PCYT1A, PDE6A, PDE6B, PDE6C, PDE6G, PDE6H, PDZD7, PEX1, PEX2, PEX7, PGK1, PHYH, PITPNM3, PLA2G5, PLK4, PNPLA6, POC1B, POC5, POMGNT1, PRCD, PRDM13, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, PRPS1, PYGM, RAB28, RAX2, RB1, RBP3, RBP4, RCBTB1, RD3, RDH11, RDH12, RDH5, REEP6, RGR, RGS9, RGS9BP, RHO, RIMS1, RIMS2, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, RPGRIP1, RPGRIP1L, RS1, RTN4IP1, SAG, SAMD11, SCAPER, SDCCAG8, SEMA4A, SLC24A1, SLC25A46, SLC6A6, SLC7A14, SNRNP200, SPATA7, SPP2, TEAD1, TIMM8A, TIMP3, TLR3, TLR4, TMEM126A, TMEM216, TMEM237, TOPORS, TREX1, TRIM32, TRNT1, TRPM1, TSPAN12, TTC8, TLL5, TTPA, TUB, TUBGCP4, TUBGCP6, TULP1, UNC119, USH1C, USH1G, USH2A, VCAN, WASF3, WDPCC, WDR19, WFS1, WHRN, ZNF408, ZNF423, ZNF513

### Retinitis pigmentosa, umfassendes Panel v1 (101 Gene)

ABCA4, ADIPOR1, AGBL5, AHR, ARHGEF18, ARL2BP, ARL3, ARL6, BBS1, BBS2, BEST1, CA4, CC2D2A, CERKL, CFAP418, CLCC1, CLRN1, CNGA1, CNGB1, CRB1, CRX, CYP4V2, DHDDS, DHX38, EMC1, EXOSC2, EYS, FAM161A, FLVCR1, GNPTG, GPR125, GUCA1B, HGSNAT, HK1, IDH3B, IFT140, IFT172, IMPDH1, IMPG1, IMPG2, KIAA1549, KIZ, KLHL7, LRAT, MAK, MAPKAPK3, MERTK, MVK, NEK2, NEUROD1, NR2E3, NRL, PANK2, PCARE, PDE6A, PDE6B, PDE6G, PGK1, POC5, POMGNT1, PRCD, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, PRPS1, RBP3, RBP4, RDH11, RDH12, REEP6, RGR, RHO, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, SAG, SAMD11, SCAPER, SEMA4A, SLC7A14, SNRNP200, SPATA7, SPP2, TOPORS, TRNT1, TTC8, TTPA, TULP1, USH2A, WDR19, ZNF408, ZNF513

### Retinitis pigmentosa, autosomal-rezessiv v1 (77 Gene)

ABCA4, ADGRA3, ADIPOR1, AGBL5, AHR, ARHGEF18, ARL2BP, ARL3, ARL6, BBS1, BBS2, BEST1, C8orf37, CC2D2A, CERKL, CLCC1, CLRN1, CNGA1, CNGB1, CRB1, CYP4V2, DHDDS, DHX38, EMC1, EXOSC2, EYS, FAM161A, FLVCR1, GNPTG, HGSNAT, IDH3B, IFT140, IFT172, IMPG2, KIAA1549, KIZ, LRAT, MAK, MERTK, MVK, NEK2, NEUROD1, NR2E3, NRL, PANK2, PCARE, PDE6A, PDE6B, PDE6G, POC5, POMGNT1, PRCD, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, PRPS1, RBP3, RBP4, RDH11, RDH12, REEP6, RGR, RHO, RLBP1, ROM1, RP1, RP1L1, RPE65, SAG, SAMD11, SCAPER, SLC7A14, SPATA7, TRNT1, TTC8, TTPA, TULP1, USH2A, WDR19, ZNF408, ZNF513

### Retinitis pigmentosa, autosomal-dominant v1 (33 Gene)

ADIPOR1, ARL3, BEST1, CA4, CRB1, CRX, GUCA1B, HK1, IMPDH1, IMPG1, KLHL7, MAPKAPK3, NR2E3, NRL, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, RDH12, RGR, RHO, ROM1, RP1, RP1L1, RP9, RPE65, SAG, SEMA4A, SNRNP200, SPP2, TOPORS

**Retinitis pigmentosa inkl. LCA (RP\_total\_LCA) v2 (118 Gene)**

*ABCA4, ADGRA3, ADIPOR1, AGBL5, AHR, AIPL1, ARHGEF18, ARL2BP, ARL3, ARL6, BBS1, BBS2, BCOR, BEST1, C8orf37, CA4, CABP4, CC2D2A, CCT2, CEP290, CERKL, CLCC1, CLRN1, CLUAP1, CNGA1, CNGB1, CRB1, CRX, CYP4V2, DHDDS, DHX38, DTHD1, EMC1, EXOSC2, EYS, FAM161A, FLVCR1, GDF6, GNPTG, GUCA1B, GUCY2D, HGSNAT, HK1, IDH3B, IFT140, IFT172, IMPDH1, IMPG1, IMPG2, IQCB1, KCNJ13, KIAA1549, KIZ, KLHL7, LCA5, LRAT, MAK, MAPKAPK3, MERTK, MVK, NEK2, NEUROD1, NMNAT1, NR2E3, NRL, OTX2, PANK2, PCARE, PDE6A, PDE6B, PDE6G, PGK1, POC5, POMGNT1, PRCD, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, PRPS1, RBP3, RBP4, RD3, RDH11, RDH12, REEP6, RGR, RHO, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, RPGRIP1, SAG, SAMD11, SCAPER, SEMA4A, SLC6A6, SLC7A14, SNRNP200, SPATA7, SPP2, TOPORS, TRNT1, TTC8, TTPA, TULP1, USH2A, WDR19, ZNF408, ZNF513*

**Retinitis pigmentosa inklusive LCA und CNSB (RP\_total\_LCA\_CSNB) v2 (129 Gene)**

*ABCA4, ADGRA3, ADIPOR1, AGBL5, AHR, AIPL1, ARHGEF18, ARL2BP, ARL3, ARL6, BBS1, BBS2, BCOR, BEST1, C8orf37, CA4, CABP4, CACNA1F, CC2D2A, CCT2, CEP290, CERKL, CLCC1, CLRN1, CLUAP1, CNGA1, CNGB1, CRB1, CRX, CYP4V2, DHDDS, DHX38, DTHD1, EMC1, EXOSC2, EYS, FAM161A, FLVCR1, GDF6, GNAT1, GNB3, GNPTG, GPR179, GRK1, GRM6, GUCA1B, GUCY2D, HGSNAT, HK1, IDH3B, IFT140, IFT172, IMPDH1, IMPG1, IMPG2, IQCB1, KCNJ13, KIAA1549, KIZ, KLHL7, LCA5, LRAT, LRIT3, MAK, MAPKAPK3, MERTK, MVK, NEK2, NEUROD1, NMNAT1, NR2E3, NRL, NYX, OTX2, PANK2, PCARE, PDE6A, PDE6B, PDE6G, PGK1, POC5, POMGNT1, PRCD, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, PRPS1, RBP3, RBP4, RD3, RDH11, RDH12, REEP6, RGR, RHO, RIMS2, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, RPGRIP1, SAG, SAMD11, SCAPER, SEMA4A, SLC24A1, SLC6A6, SLC7A14, SNRNP200, SPATA7, SPP2, TOPORS, TRNT1, TRPM1, TTC8, TTPA, TULP1, USH2A, WDR19, ZNF408, ZNF513*

**Usher-Syndrom v1 (18 Gene)**

*ABHD12, ADGRV1, ARSG, CDH23, CEP250, CEP78, CIB2, CLRN1, ESPN, EXOSC2, HARS1, MYO7A, PCDH15, PDZD7, USH1C, USH1G, USH2A, WHRN*

**Vitreoretinopathien inkl. FEVR v1 (24 Gene)**

*ATOH7, BEST1, CAPN5, COL11A1, COL11A2, COL2A1, COL9A1, COL9A2, COL9A3, CRB1, CTC1, CTNNB1, FZD4, JAG1, KCNJ13, KIF11, LRP5, NDP, RCBTB1, TIMP3, TREX1, TSPAN*