

G-Mendeliome Disease-Specific Panel

KEY FEATURES

1. Comprehensive analysis of a broad range of diseases

Identifying diseases associated with:
Acute lymphatic leukemia, Acute Myeloid Leukemia, Cardiac disease, Coagulation, Epilepsy, Hearing loss, Inborn errors of metabolism, Lymphoma, Lysosomal storage disease, Common hereditary cancer for a medical checkup, Neuromuscular disease, Parkinson's disease, Alzheimer's disease, Dementia, Dystonia, RASopathies, Retinitis pigmentosa, Short stature, Skin disease, and Somatic cancer

2. Collaboration with the leading CRO in the country

Developed 17 different panels for assessing genes of related diseases

SPECIFICATION

Gene count*	Ranges from 14 to 293 genes
Covered regions	Whole CDS, hotspots
Target size	37-1,159 kb
Mutation type	SNV, Indel, CNV
Sample type	Differs by somatic or germline panel
Platform	All sequencers from Illumina, Thermo Fisher, MGI, PacBio, and Oxford Nanopore
Bioinformatics pipeline	Primary, Secondary and Tertiary analysis result (FASTQ to VCF, VCF to Clinical report)

* Gene Add-On Service: Genes can be added by customer's request

PACKAGE COMPOSITION

Package name		Compositions		Package option		Options	
Target Enrichment	Target capture Probe		-	Pooling method	Single Reaction	Pre-capture Pooling	
Standard	Target Enrichment reagents	Library prep Kit	-	Library Preparation kits	Standard Kit	EP-kit	
All-In-One		Beads / Polymerase		Hybridization Enhancer	Included	Not included	

LIST OF PANELS FOR VARIOUS DISEASES

Panel Name	Related Diseases	Gene List																																																																																																																																																																																							
Alzheimer-Parkinson-Dementia Panel	Alzheimer's disease, Parkinson's disease, Dementia, Dystonia	AARS	ABCA13	ABCA7	ABCB11	ADCY5	ALS2	ANG	ANO3	APP	ATPI3A2	ATPIA3	ATP7B	C19orf12	CACNA1B	CHCHD10	CHMP2B	CHRNA4	CIZ1	COG1	COL4A4	COL6A3	DAO	DCTN1	DNMT1	EVC	FERMT1	FIG4	FREM2	FUS	GBA	GCH1	GNAL	GNAO1	GRM1	GRN	HNRNPA1	HNRNPA2B1	HPCA	HPSE2	IL12RB2	KCTD17	KMT2B	L2HGDH	LAMA3	LRRK2	MAPT	MATR3	MECR	NDUFV3	NEK1	NPHS2	OPTN	PANK2	PARK7	PDP1	PINK1	PLA2G6	PNKD	PRKN	PRKRA	PRNP	PRRT2	PSENI	PSEN2	RELN	SERPIND1	SETX	SGCE	SIGMAR1	SLC12A6	SLC19A3	SLC2A1	SLC30A10	SLC6A3	SNCA	SOD1	SORL1	SOX6	SPG11	SQSTM1	SRY	SUMF1	TAF1	TAF15	TARDBP	TBK1	TDRD7	TH	THAP1	TIMM8A	TORIA	TREM2	TUBA4A	TUBB4A	UBQLN2	VAC14	VAPB	VCAN	VCP	VPSI3A	WNK1																																																																																			
		Bleeding Disorder-Coagulopathy Panel	Bleeding Disorder, Coagulation	AARS	ABCA1	ABCA13	ABCB11	ACTN1	ANKRD26	ANO6	AP3B1	BLOC1S3	BLOC1S6	BRCA1	BRCA2	BRIPI	CD36	CDAN1	COG1	COL4A4	CYCS	DDX41	DKC1	DNMT1	DTNBPI	ELANE	ERCC4	ETV6	EVC	F10	F11	F13A1	F13B	F2	F5	F7	F8	F9	FANCA	FANCB	FANCC	FANCD2	FANCE	FANCF	FANCG	FANCI	FANCL	FANCM	FERMT1	FERMT2	FGA	FBG	FGG	FLII	FREM2	FYB1	GATA1	GATA2	GFI1	GPIIB	GPIBA	GPIBB	GP6	GP9	GRM1	HAX1	HOXA11	HPS1	HPS3	HPS4	HPS5	HPS6	HPSE2	IFNG	IL12RB2	ITGA2B	ITGB3	L2HGDH	LAMA3	LMAN1	LYST	MASTL	MCFD2	MLPH	MPL	MYH9	MYO5A	NBEAL2	NBN	NDUFV3	NHP2	NOPI0	NPHS2	P2RY12	PALB2	PDP1	PLA2G4A	PLAU	PRF1	PRKACG	RAB27A	RAD51C	RASGRP2	RBM8A	RPL11	RPL35A	RPL5	RPS10	RPS19	RPS24	RPS26	RPS7	RUNX1	SBDS	SEC23B	SERPIND1	SERPINE1	SERPINF2	SLC12A6	SLFN14	SLX4	SOX6	SRC	SRP72	SRY	STIM1	SUMF1	TBXA2R	TBXAS1	TDRD7	TERC	TERT	TINF2	UBE2T	VCAN	VIPAS39	VPS33B	VWF	WAS	WIPF1	WNK1	XRCC2																																											
				Cardiovascular Panel	Cardiac diseases	ABCC9	ABCG5	ABCG8	ACTA1	ACTA2	ACTC1	ACTN2	AKAP9	ALMS1	ANK2	ANKRD1	APOA4	APOA5	APOB	APOC2	APOE	BAG3	BRAF	CACNA1C	CACNA2D1	CACNB2	CALM1	CALR3	CASQ2	CAV3	CBL	CBS	CETP	COL3A1	COL5A1	COL5A2	COX15	CREB3L3	CRELD1	CRYAB	CSR3P3	CTFI	DES	DMD	DNAJC19	DOLK	DPP6	DSC2	DSG2	DSP	DTNA	EFEMP2	ELN	EMD	EYA4	FBN1	FBN2	FHL1	FHL2	FKRP	FTN	FXN	GAA	GATAD1	GCKR	GJA5	GLA	GPD1L	GPIHBP1	HADHA	HCN4	HFE	HRAS	HSPB8	ILK	JAG1	JPH2	JUP	KCNA5	KCND3	KCNE1	KCNE2	KCNE3	KCNH2	KCNJ2	KCNJ5	KCNJ8	KCNQ1	KLF10	KRAS	LAMA2	LAMA4	LAMP2	LDB3	LDLR	LDLRAP1	LMF1	LMNA	LPL	LTBP2	MAP2K1	MAP2K2	MIB1	MURC	MYBPC3	MYH11	MYH6	MYH7	MYL2	MYL3	MYLK	MYLK2	MYO6	MYOZ2	MYPN	NEXN	NKX2-5	NODAL	NOTCH1	NPPA	NRAS	PCSK9	PDLIM3	PKP2	PLN	PRDM16	PRKAG2	PRKARIA	PTPN11	RAF1	RANGRF	RBM20	RYR1	RYR2	SALL4	SCN1B	SCN2B	SCN3B	SCN4B	SCN5A	SCO2	SDHA	SEPN1	SGCB	SGCD	SGCG	SHOC2	SLC25A4	SLC2A10	SMAD3	SMAD4	SNTA1	SOS1	SREBF2	TAZ	TBX20	TBX3	TBX5	TCAP	TGFB2	TGFB3	TGFBRI	TGFBRI	TMEM43	TMPO	TNNC1	TNNI3	TNNT2	TPM1	TRDN	TRIM63	TRPM4	TTN	TTR	TXNRD2	VCL	ZBTB17	ZHX3	ZIC3						
						Common Hereditary Cancer Panel	Medical checkup	APC	ATM	ATRX	BARD1	BMPRIA	BRAF	BRC1A	BRC2A	BRIPI	CDHI	CDKN2A	CHEK2	EGLN1	EGLN2	EPAS1	EPCAM	FGFR1	FH	H3F3A	HRAS	IDH2	KIF1B	KMT2D	MAX	MDH2	MEN1	MERTK	MET	MLH1	MRE11	MSH2	MSH6	MUTYH	NBN	NFI	NF2	PALB2	PMS2	POLD1	POLE	PRSS1	PTEN	RAD50	RAD51C	RAD51D	RBI	RET	SDHA	SDHAF2	SDHB	SDHC	SDHD	SMAD4	SPINK1	STK11	TMEM127	TP53	TSC1	TSC2	VHL	WT1																																																																																																																					
								Epilepsy Panel	Epilepsy	AARS	ABCA13	ABCB11	ADGRV1	ADSL	ALDH7A1	ALG13	ARHGFE15	ARHGFE9	ARX	ASAH1	ATPIA2	ATP6AP2	CACNA1A	CASK	CDKL5	CHD2	CHRNA2	CHRNA4	CHRNA7	CHRN2	CLCN4	CLN3	CLN5	CLN6	CLN8	CNTNAP2	COG1	COL4A4	CSTB	CTSD	DCX	DEPDC5	DLG3	DNAJC5	DNMI	DNMT1	DOCK7	DYRK1A	EEF1A2	EPM2A	EVC	FERMT1	FOLR1	FOXG1	FREM2	GABRA1	GABRA2	GABRB3	GABRG2	GAMT	GATM	GNAO1	GOSR2	GRIN1	GRIN2A	GRIN2B	GRM1	HCN1	HDAC4	HNRNPU	HPSE2	IL12RB2	IQSEC2	KANSL1	KCNA2	KCNB1	KCNH5	KCNJ10	KCNMA1	KCNQ2	KCNQ3	KCNT1	KCTD7	L2HGDH	LAMA3	LGII	MAGI2	MBD5	MCEP2	MEF2C	MFSD8	NDUFV3	NECAP1	NHLRC1	NPHS2	NR2F1	NRXN1	PCDH19	PDP1	PIGA	PIGO	PIGQ	PIGV	PLCB1	PNKP	PNPO	POLG	PPT1	PRICKLE1	PRICKLE2	PRRT2	QARS	RELN	SCARB2	SCN1A	SCN1B	SCN2A	SCN8A	SCN9A	SERPIND1	SLC12A6	SLC13A5	SLC25A22	SLC2A1	SLC35A2	SLC6A8	SLC9A6	SMS	SOX6	SPTANI	SRPX2	SRY	ST3GAL3	STXBPI	SUMF1	SYN1	SYNGAP1	SYNJ1	SZT2	TBCID24	TCF4	TDRD7	TPP1	TSCI	TSC2	UBE3A	VCAN	WDR45	WNK1	WVVOX	ZEB2																																		

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Panel Name	Related Diseases	Gene List									
Hearing Loss-Deafness Panel	Hearing loss, Deafness	CDH23	CLRN1	COCH	COL11A1	COL2A1	DIAPH1	EDNRB	EYA1	GJB2	
		GJB6	KCNE1	KCNQ1	KCNQ4	MITF	MYO15A	MYO7A	OTOF	PAX3	
		POU3F4	SIX5	SLC26A4	SNAI2	SOX10	TECTA	TMC1	TMIE	TMPRSS3	
		USH1C	USH2A	WFS1							
Lymphoid Leukemia Panel	Acute lymphatic leukemia	AARS	ABCA13	ABCB11	ABL1	BRAF	BTG1	CDKN2A	COG1	COL4A4	
		CREBBP	CRLF2	DNM2	DNMT1	DNMT3A	EP300	ETV6	EVC	EZH2	
		FBXW7	FERMT1	FLT3	FREM2	GATA3	GRM1	HPSE2	IDH1	IDH2	
		IKZF1	IL12RB2	IL7R	JAK1	JAK2	JAK3	KDM6A	KMT2A	KMT2D	
		KRAS	L2HGDH	LAMA3	LEF1	LMO1	MAPK1	NDUFV3	NFI	NOTCH1	
		NPHS2	NRAS	NSD2	NT5C2	NUDT15	PAX5	PDP1	PHF6	PTEN	
		PTPN11	RBI	RUNX1	SERPIND1	SETD2	SH2B3	SLC12A6	SOX6	SRY	
		STAG2	STAT3	STAT5B	SUMF1	TBL1XR1	TCF3	TDRD7	TP53	TPMT	
		VCAN	WNK1	WT1							
Lymphoma Panel	Lymphoma	AARS	ABCA13	ABCB11	ALK	ATM	B2M	BCL6	BIRC3	BRAF	
		BTK	CARD11	CD79A	CD79B	COG1	COL4A4	CREBBP	CXCR4	DNMT1	
		EGR2	EP300	EVC	EZH2	FAS	FAT4	FBXO11	FERMT1	FREM2	
		GRM1	HPSE2	ID3	IDH2	IKBKB	IKZF1	IL12RB2	JAK3	KLF2	
		L2HGDH	LAMA3	MYC	MYD88	NDUFV3	NFKBIE	NOTCH1	NOTCH2	NPHS2	
		PDP1	PLCG1	PLCG2	POT1	PRDM1	RHOA	RPS15	RRAGC	SERPIND1	
		SF3B1	SLC12A6	SOCS1	SOX6	SRY	STAT3	STAT5B	SUMF1	TBL1XR1	
		TCF3	TDRD7	TET2	TNFAIP3	TNFRSF14	TP53	TP63	TRAF3	UBR5	
		VCAN	WNK1	XPO1							
Lysosomal Storage Diseases Panel	Lysosomal storage disease	ABCD1	ACOX1	AGA	AGL	ALDOA	ALDOB	ARSA	ARSB	ATP13A2	
		ATP7A	ATP7B	CLN3	CLN5	CLN6	CLN8	CTNS	CTSA	CTSD	
		CTSF	DNAJC5	FUCA1	G6PC	GAA	GALC	GALE	GALK1	GALK2	
		GALNS	GALT	GBA	GBE1	GJB2	GLA	GLB1	GNPTAB	GNPTG	
		GNS	GRN	GUSB	GYS1	GYS2	HEXA	HEXB	HGSNAT	HPRT1	
		HYAL1	IDS	IDUA	KCTD7	LDHA	LIPA	MAN2B1	MANBA	MCOLN1	
		MFSD8	NAGA	NAGLU	NEU1	NPC1	NPC2	PEX1	PEX10	PEX2	
		PEX13	PEX14	PEX16	PEX19	PEX2	PEX26	PEX3	PEX5	PEX6	
		PFKM	PHKA2	PHKB	PHKG2	PPT1	PYGL	PYGM	SGSH	SLC17A5	
		SLC2A2	SLC37A4	SMPD1	SUMF1	TPP1					
Metabolic Disorders Panel	Inborn errors of metabolism	ABCD1	ACAD8	ACADM	ACADS	ACADSB	ACADVL	ACAT1	AHCY	ARG1	
		ASL	ASS1	AUH	BCKDHA	BCKDHB	BTD	CBS	CPS1	CPT1A	
		CPT2	DBT	DECRI	DHCR7	DLD	ETFA	ETFB	ETFDH	FAH	
		GALE	GALK1	GALT	GAMT	GATM	GCDH	GCHI	GNMT	HADH	
		HADHA	HADHB	HLC5	HMGCL	HPD	HSD17B10	IVD	LMBRD1	MAT1A	
		MCCC1	MCCC2	MLYCD	MMAA	MMAB	MMACHC	MMADHC	MMUT	MTHFR	
		MTR	MTRR	OPA3	OTC	PAH	PCBD1	PCCA	PCCB	PTS	
		QDPR	SLC22A5	SLC25A13	SLC25A20	SLC6A8	TAT	TAZ	TCN2		
Myeloid Leukemia Panel	Acute myeloid leukemia	ANKRD26	ASXL1	ATRX	BCOR	BCORL1	BRAF	CALR	CBL	CBLB	
		CEBPA	CSF3R	DDX41	DNMT3A	ETV6	EZH2	FLT3	GATA1	GATA2	
		HRAS	IDH1	IDH2	JAK2	JAK3	KDM6A	KIT	KRAS	MPL	
		NOTCH1	NPM1	NRAS	PDGFRA	PHF6	PPM1D	PTPN11	RAD21	RUNX1	
SETBP1	SF3B1	SMC1A	SMC3	SRSF2	STAG1	STAG2	STAT3	TET2			
TP53	U2AF1	WT1	ZRSR2								
Neuromuscular Panel	Neuromuscular disease	AARS	ABC7	ABCD1	ABHD12	ACAD9	ACADL	ACADM	ACO2	ACTA1	
		ADCK3	AFG3L2	AGL	AIFM1	ALDH3A2	AMPD1	ANO10	ANO5	AP4B1	
		AP4E1	AP4M1	AP4S1	AP5Z1	APTX	ARSA	ATCAY	ATLJ	ATM	
		ATP2A1	ATP7A	ATP7B	ATP8A2	BAG3	BEAN1	BINI	BSC12	C10orf2	
		C12orf65	C19orf12	CACNA1A	CACNA1S	CACNB4	CAPN3	CASK	CAV3	CCDC78	
		CCDC88C	CFL2	CHAT	CHRNA1	CHRNA1	CHRNA1	CHRNA1	CHRNA1	CHRNA1	
		CLCN2	CLN5	CNTN1	COL6A1	COL6A2	COL6A3	COLQ	CPT1B	CPT2	
		CRYAB	CTDPI	CWF19L1	CYP27A1	CYP2U1	CYP7B1	DAG1	DCTN1	DDHD1	
		DDHD2	DES	DMD	DNAJB2	DNAJB6	DNM2	DNMT1	DOK7	DYNCH1	
		DYSF	EEF2	EGR2	ELOVL4	ELOVL5	EMD	ERLIN2	ETFA	ETFB	
		FA2H	FAM134B	FGD4	FGF14	FHL1	FIG4	FKRP	FKTN	FLNC	
		FLVCR1	FRMD7	FUS	FXN	GAA	GADI	GALC	GAN	GARS	
		GBA2	GDAP1	GJB1	GJC2	GLA	GLE1	GNB4	GNE	GOSR2	
		GPRI43	GRID2	GRM1	GYS1	HADHA	HADHB	HINT1	HOXD10	HSPB1	
		HSPB8	HSPD1	HSPG2	IGHMBP2	IKBKAP	ISPD	ITGA7	ITPR1	JPH3	
		KBTBD13	KCNA1	KCNC3	KCND3	KCNE3	KCNJ10	KCNJ18	KIAA0196	KIFIA	
		KIF1B	KIF1C	KIF5A	KLHL40	KLHL41	LICAM	LAMA1	LAMA2	LARGE	
		LDB3	LITAF	LMNA	LPINI	LRSAM1	MARS	MARS2	MATR3	MED25	
		MFN2	MPZ	MRE11A	MTM1	MTMR14	MTMR2	MTPAP	MTPP	MUSK	
		MYF6	MYH2	MYH7	MYOT	NDRG1	NEB	NEFL	NGF	NIPA1	
		NOP56	NTRK1	OPA1	OPA3	OPHN1	PABPN1	PANK2	PKD3	PDYN	
		PEX7	PFKM	PGAM2	PHKA1	PHYH	PLEC	PLEKHG5	PLP1	PMM2	
		PMP22	PNKP	PNPLA6	POLG	POLG2	POMGNT1	POMT1	POMT2	PRKCG	
		PRPS1	PRX	PTF1A	PTRF	PYGM	RAB7A	RAPSN	REEP1	RNF216	

Panel Name	Related Diseases	Gene List									
Neuromuscular Panel	Neuromuscular disease	RRM2B	RTN2	RUBCN	RYR1	RYR2	SACS	SBF2	SCN4A	SCN9A	
		SEPN1	SETX	SGCA	SGCB	SGCD	SGCE	SGCG	SH3TC2	SIL1	
		SLC12A6	SLC16A2	SLCIA3	SLC33A1	SLC39A4	SLC52A2	SLC9A1	SLC9A6	SMN1	
		SNX14	SOD1	SPAST	SPG11	SPG20	SPG21	SPG7	SPTBN2	SPTLC1	
		SPTLC2	STAC3	STUB1	SUCLA2	SYNE1	SYNE2	SYT14	TBP	TCAP	
		TDP1	TECPR2	TGM6	TK2	TMEM240	TNNI2	TNNT1	TPM2	TPM3	
		TPP1	TRIM32	TRPV4	TTBK2	TTN	TPA	TTR	TUBB4A	TYMP	
		VAMP1	VCP	VLDLR	VPS13A	VPS37A	VRK1	WFS1	WNK1	WVVOX	
		XK	YARS	ZFYVE26	ZFYVE27	ZNF592					
RASopathy Panel	RASopathies	BRAF	CBL	HRAS	KRAS	MAP2K1	MAP2K2	NFI	NRAS	PTPN11	
		RAF1	RIT1	SHOC2	SOS1	SPRED1					
Retinitis Pigmentosa Panel	Retinitis pigmentosa	ABCA4	ABHD12	ADAM9	ADGRA3	AGBL5	AIPL1	ARHGEF18	ARL2BP	ARL3	
		ARL6	BBS1	BBS2	BEST1	C2orf71	C8orf37	CA4	CABP4	CACNA1F	
		CACNA2D4	CDHRI	CERKL	CLRN1	CNGA1	CNGB1	CNGB3	CNNM4	CRBI	
		CRX	CWC27	CYP4V2	DHDDS	DHX38	ELOVL4	EMC1	EYS	FAM161A	
		FLVCR1	FSCN2	GNAT2	GUCA1A	GUCA1B	GUCY2D	HGSNAT	HKI	IDH3B	
		IFT140	IFT172	IMPDI1	IMP2	KCNV2	KIAA1549	KIZ	KLHL7	LRAT	
		MAK	MERTK	MVK	NEK2	NEUROD1	NR2E3	NRL	OFD1	PDE6A	
		PDE6B	PDE6C	PDE6G	PDE6H	PITPNM3	POMGNT1	PRCD	PRKCG	PROM1	
		PRPF3	PRPF31	PRPF4	PRPF6	PRPF8	PRPH2	RAB28	RAX2	RBP3	
		RDH12	RDH5	REEP6	RGR	RGS9	RGS9BP	RHO	RIMS1	RLBP1	
ROM1	RPI	RP2	RP9	RPE65	RPGR	RPGRIPI	SAG	SEMA4A			
SLC7A14	SNRNP200	SPATA7	SPP2	TOPORS	TRNT1	TTC8	TULP1	UNC119			
USH2A	ZNF408	ZNF513									
Short Stature Panel	Short stature	AARS	ABCA13	ABCB11	ACTA2	ADAMTS10	ADAMTS2	ADAMTSL4	AGPS	ALPL	
		ARSE	ATP6V0A2	ATP7A	ATRX	B3GALT6	B4GALT7	BGN	BLM	BRAF	
		CBL	CBS	CDC6	CDTI	CHST14	COG1	COL10A1	COL11A1	COL11A2	
		COL1A2	COL2A1	COL3A1	COL4A4	COL5A1	COL5A2	COL9A1	COL9A2	COL9A3	
		COMP	CREBBP	CRTAP	CTSK	CUL7	DHCR7	DLL3	DNMT1	DYNC2H1	
		DYRK1A	EBP	EFEMP2	ELN	EP300	ERCC6	ERCC8	EVC	EVC2	
		EXT1	EXT2	FBLN5	FBN1	FBN2	FERMT1	FGDI	FGF23	FGFR1	
		FGFR2	FGFR3	FKBP10	FLNA	FLNB	FOXE3	FREM2	GHI	GHR	
		GHRHR	GLI2	GLI3	GNAS	GNPAT	GRM1	HESX1	HPSE2	HRAS	
		HSPG2	IFITM5	IFT80	IGF1	IGFIR	IL12RB2	INPL1	KCNJ2	KCNJ8	
KDM6A	KMT2D	KRAS	L2HGDH	LAMA3	LBR	LHX3	LIFR	LOX			
LTBP2	LZTR1	MAP2K1	MAP2K2	MAT2A	MATN3	MED12	MFAP5	MYH11			
MYLK	NBAS	NBN	NDUFV3	NEK1	NFI	NIPBL	NPHS2	NRAS			
NSDHL	OBSL1	ORC1	ORC4	ORC6	P3H1	PCNT	PDP1	PEX7			
PHOX	PLOD1	POR	POU1F1	PP1B	PPP1CB	PRKG1	PROPI	PTPN11			
PYCR1	RAF1	RIN2	RIT1	RMRP	ROR2	RPS6KA3	RUNX2	SBD5			
SERPIND1	SERPINH1	SHOC2	SKI	SLC12A6	SLC26A2	SLC2A10	SLC34A3	SLC35D1			
SLC39A13	SMAD3	SMARCA11	SMC1A	SMC3	SMS	SOS1	SOS2	SOX3			
SOX6	SOX9	SPRED1	SRCAP	SRY	SUMF1	TDRD7	TGFB1	TGFB2			
TGFB3	TGFB9	TGFB2	THRB	TRIM37	TRIP11	TRPS1	TRPV4	TTC21B			
VCAN	WDR19	WDR35	WNK1	WRN							
Skin Disorder Panel	Skin diseases	ABCA12	ABCB6	ABCC6	ABHD5	ADAMTS2	ADAR	ALAD	ALAS2	ALDH3A2	
		ALOX12B	ALOXE3	AP1S1	ATM	ATP2A2	ATP2C1	ATP6V0A2	BLM	CARD14	
		CDH3	CDSN	CLDN1	COL17A1	COL1A1	COL1A2	COL3A1	COL5A1	COL5A2	
		COL7A1	CPOX	CTCI	CTSC	CYP4F22	DDB2	DKC1	DOCK8	DSG1	
		DSG4	DSP	DST	EBP	ECM1	EDA	EDAR	EDARADD	EFEMP2	
		ELN	ERCC2	ERCC3	ERCC4	ERCC5	EXPH5	FANCA	FANCC	FANCG	
		FECH	FERMT1	FLCN	FLG	GJB2	GJB3	GJB4	GJB6	GNAS	
		GORAB	GPRI43	GSN	GTF2H5	HFE	HMBS	HR	IL36RN	ITGA3	
		ITGA6	ITGB4	JUP	KIT	KRT1	KRT10	KRT14	KRT16	KRT17	
		KRT2	KRT5	KRT6A	KRT6B	KRT6C	KRT81	KRT83	KRT86	KRT9	
LAMA3	LAMB3	LAMC2	LIPH	LIPN	LOR	LPAR6	LYST	MBTPS2			
NF1	NF2	NHP2	NIPAL4	NOPI0	NSDHL	OCA2	PKP1	PLEC			
PLOD1	PNPLA1	POFUT1	POGLUT1	POLH	POMP	PPOX	PRKARIA	PCH1			
PTCH2	PYCR1	RECQL4	RTEL1	SLC27A4	SLC39A4	SLC45A2	SLURP1	SNAP29			
SPINK5	SPRED1	STI4	STAT3	STS	SUFU	TERC	TERT	TGMI			
TGM5	TINF2	TNKB	TRPV3	TSC1	TSC2	TTR	TYK2	TYR			
TYRPI	UROD	UROS	WAS	WRAP53	XPA	XPC	ZMPSTE24				
Solid Tumor Panel	Somatic cancer	ABL1	AKT1	ALK	APC	ATM	BRAF	BRCA1	BRCA2	CDH1	
		CDKN2A	CSF1R	CTNNB1	DLC1	EGFR	ERBB2	ERBB4	ESR1	FBXW7	
		FGFR1	FGFR2	FGFR3	FTSJ3	GNAI1	GNAQ	GNAS	HNFA1	HRAS	
		IDH1	IDH2	JAK2	JAK3	KCNB2	KDR	KIT	KRAS	MET	
		MUHI	MYC	MYCN	NOTCH1	NRAS	NRXN1	PDGFRA	PIK3CA	PTEN	
		PTPN11	RBI	RBK1	RET	ROSI	SMAD4	SMARCB1	SMO	SMURF1	
		SRC	SSFA2	STK11	TP53	VHL	ZNF594				