

**Клінічна область Імунологія - 575 генів\***

	<b>Розділ:</b>	<b>Панелі:</b>	<b>Гени:</b>
1	Біологічні розлади теломер / Telomere Biology Disorders	Біологічні розлади теломер - 15 генів	ACD, CTC1, DKC1, NHP2, NOP10, PARN, POT1, RTEL1, STN1, TERC, TERT, TINF2, WRAP53, NAF1, ZCCHC8
2	Первинний імунодефіцит / Primary Immunodeficiency	Вроджені порушення імунітету та цитопенії - 574 гена	ABCB7, ABCG5, ABCG8, ACAN, ACD, ACP5, ACTB, ACTN1, ADA, ADA2, ADAM17, ADAMTS13, ADAR, ADGRE2, AICDA, AIRE, AK2, AK7, ALAS2, ALG6, ALPK1, ANGPT1, ANKRD26, ANKZF1, ANO6, AP3B1, AP3D1, ARHGEF1, ARMC4, ARPC1B, ASAH1, ATM, ATP6AP1, ATR, B2M, BACH2, BCL10, BCL11B, BLM, BLNK, BLOC1S3, BLOC1S6, BRCA1, BRCA2, BRIP1, BTK, C11orf70, C15orf41, C17orf62, C1QA, C1QB, C1QC, C1S, C2, C3, C5, C6, C7, C8A, C8B, C9, CARD11, CARD14, CARD8, CARD9, CARMIL2, CASP10, CASP8, CBL, CCBE1, CCDC103, CCDC114, CCDC151, CCDC39, CCDC40, CCDC65, CCNO, CD19, CD247, CD27, CD3D, CD3E, CD3G, CD40, CD40LG, CD46, CD55, CD59, CD79A, CD79B, CD81, CD8A, CDAN1, CDC42, CDCA7, CEBPE, CEP164, CFAP298, CFB, CFD, CFH, CFI, CFP, CFTR, CHD7, CHEK2, CIB1, CIITA, CLCN7, CLPB, COL7A1, COPA, CORO1A, CR2, CSF2RA, CSF2RB, CSF3R, CTC1, CTLA4, CTPS1, CTSC, CXCR2, CXCR4, CYBA, CYBB, CYCS, CYP27A1, DBR1, DCLRE1C, DDX41, DDX58, DEF6, DGAT1, DGKE, DIAPH1, DKC1, DNAAF1, DNAAF2, DNAAF3, DNAAF4, DNAAF5, DNAH1, DNAH11, DNAH5, DNAH8, DNAH9, DNAI1, DNAI2, DNAJB13, DNAJC21, DNAL1, DNASE1L3, DNASE2, DNMT3B, DOCK2, DOCK8, DRC1, DSG1, DTNBP1, DUOX2, EFL1, EIF2AK3, ELANE, EPCAM, EPG5, ERBIN, ERCC2, ERCC3, ERCC4, ERCC6L2, ETV6, EXTL3, FADD, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAS, FASLG, FAT4, FCHO1, FERMT1, FERMT3, FLI1, FNIP1, FOXI3, FOXN1, FOXP3, FPR1, G6PC, G6PC3, G6PD, GAS8, GATA1, GATA2, GF11, GINS1, GLRX5, GP1BA, GP6, GP9, GTF2E2, GTF2H5, GUCY2C, HAX1, HELLS, HMOX1, HPS1, HPS3, HPS4, HPS5, HPS6, HTRA2, HYOU1, ICOS, ICOSLG, IFIH1, IFNAR1, IFNAR2, IFNGR1, IFNGR2, IGLL1, IKBKB, IKZF1, IL10, IL10RA, IL10RB, IL12B, IL12RB1, IL12RB2, IL17F, IL17RA, IL17RC, IL18BP, IL1RN, IL21, IL21R, IL23R, IL2RA, IL2RB, IL2RG, IL36RN, IL6R, IL6ST, IL7R, IRAK4, IRF2BP2, IRF4, IRF7, IRF8, IRF9, ISG15, ITCH, ITGA2B, ITGAM, ITGB2, ITGB3, ITK, JAGN1, JAK1, JAK2, JAK3, KAT6A, KDM1A, KDM6A, KIF23, KIT, KLF1, KLHDC8B, KMT2A, KMT2D, LAMTOR2, LARS2, LAT, LCK, LCT, LIG1, LIG4, LIPA, LPIN2, LRBA, LRRC56, LRRC6, LRRC8A, LYN, LYST, MAD2L2, MAGT1, MALT1, MAP3K14, MBD4, MCIDAS, MCM4, MECOM, MEFV, MKL1, MLH1, MOGS, MPL, MPLKIP, MS4A1, MSH2, MSH6, MSN, MTHFD1, MVK, MYD88, MYH9, MYO5B, MYSM1, NAF1, NBAS, NBN, NCF2, NCF4, NCKAP1L, NCSTN, NDUFB11, NEUROG3, NF1, NFAT5, NFE2L2, NFKB1, NFKB2, NFKBIA, NHEJ1, NHP2, NLRC4, NLRP1, NLRP12, NLRP3, NME8, NOD2, NOP10, NOTCH2, NPAT, NSMCE3, OAS1, OFD1, ORAI1, OSTM1, OTULIN, P2RY12, PALB2, PARN, PAX1, PEPD, PGM3, PIH1D3, PIK3CD, PIK3R1, PLA2G4A, PLCG2, PLG, PLVAP, PMM2,



			<p>PMS2, PNLIP, PNP, POLA1, POLD1, POLD2, POLE, POLE2, POLR3A, POLR3F, POMP, POT1, PRF1, PRKCD, PRKDC, PSENEN, PSMA3, PSMB4, PSMB8, PSMG2, PSTPIP1, PTEN, PTPRC, PUS1, RAB27A, RAC2, RAD51, RAD51C, RAG1, RAG2, RANBP2, RASGRP1, RASGRP2, RBCK1, RBM8A, RECQL4, REL, RELA, RELB, RFX5, RFXANK, RFXAP, RHOH, RIPK1, RMRP, RNASEH2A, RNASEH2B, RNASEH2C, RNF113A, RNF168, RNF31, RNU4ATAC, RORC, RPGR, RPL11, RPL15, RPL18, RPL19, RPL23, RPL26, RPL27, RPL31, RPL35, RPL35A, RPL5, RPL9, RPS10, RPS15A, RPS19, RPS24, RPS26, RPS27, RPS28, RPS29, RPS7, RPSA, RSPH1, RSPH3, RSPH4A, RSPH9, RTE1, RUNX1, SAMD9, SAMD9L, SAMHD1, SAR1B, SBF2, SCO2, SEC23B, SEC61A1, SEMA3E, SERPING1, SGPL1, SH2D1A, SH3BP2, SH3KBP1, SI, SIAE, SKIV2L, SLC10A2, SLC19A2, SLC25A38, SLC26A3, SLC29A3, SLC35C1, SLC37A4, SLC39A7, SLC46A1, SLC51B, SLC5A1, SLC7A7, SLC9A3, SLX4, SMARCA1, SMARCD2, SNX10, SP110, SPAG1, SPINK5, SPINT2, SPPL2A, SRP54, SRP72, STAT1, STAT2, STAT3, STAT4, STAT5B, STIM1, STK4, STN1, STX11, STX3, STXBP2, TAOK2, TAP1, TAP2, TAPBP, TAZ, TBX1, TBXA2R, TCF3, TCIRG1, TCN2, TERC, TERF2IP, TERT, TET2, TFRC, TGFB1, TGFB1, TGFB2, THBD, THPO, TICAM1, TIMM50, TINF2, TLR3, TLR7, TMC6, TMC8, TMEM173, TMPRSS15, TNFAIP3, TNFRSF11A, TNFRSF13B, TNFRSF13C, TNFRSF1A, TNFRSF4, TNFRSF6B, TNFRSF9, TNFSF11, TNFSF12, TONSL, TOP2B, TP53, TP63, TPP2, TRAF3, TRAF3IP2, TREX1, TRNT1, TSR2, TTC37, TTC7A, TUBB1, TYK2, UBE2T, UNC13D, UNC45A, UNC93B1, UNG, USB1, VAV1, VIPAS39, VPS13B, VPS33B, VPS45, WAS, WDR1, WIPF1, WNT2B, WRAP53, XIAP, XRCC2, YARS2, ZAP70, ZBTB24, ZCCHC8, ZMYND10, ZNF341</p>
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		Первинний імунодефіцит - 474 гена	ACD, ACP5, ACTB, ADA, ADA2, ADAM17, ADAR, ADGRE2, AICDA, AIRE, AK2, ALG6, ALPK1, ANGPT1, ANKZF1, AP3B1, AP3D1, ARHGEF1, ARPC1B, ASAH1, ATM, ATP6AP1, B2M, BACH2, BCL10, BCL11B, BLM, BLNK, BLOC1S3, BLOC1S6, BTK, C17orf62, C1QA, C1QB, C1QC, C1S, C2, C3, C5, C6, C7, C8A, C8B, C9, CARD11, CARD14, CARD8, CARD9, CARMIL2, CASP10, CASP8, CBL, CCBE1, CD19, CD247, CD27, CD3D, CD3E, CD3G, CD40, CD40LG, CD46, CD55, CD59, CD79A, CD79B, CD81, CD8A, CDC42, CDCA7, CEBPE, CFB, CFD, CFH, CFI, CFP, CHD7, CIB1, CIITA, CLCN7, CLPB, COL7A1, COPA, CORO1A, CR2, CSF2RA, CSF2RB, CSF3R, CTC1, CTLA4, CTPS1, CTSC, CXCR2, CXCR4, CYBA, CYBB, CYP27A1, DBR1, DCLRE1C, DDX58, DEF6, DGAT1, DIAPH1, DKC1, DNAJC21, DNASE1L3, DNASE2, DNMT3B, DOCK2, DOCK8, DSG1, DTNBP1, DUOX2, EFL1, EIF2AK3, ELANE, EPG5, ERBIN, ERCC2, ERCC3, ERCC6L2, EXTL3, FADD, FANCA, FANCB, FANCE, FANCF, FANCI, FANCL, FAS, FASLG, FAT4, FCHO1, FERMT1, FERMT3, FNIP1, FOXP3, FOXN1, FOXP3, FPR1, G6PC, G6PC3, G6PD, GATA1, GATA2, GFI1, GINS1, GTF2E2, GTF2H5, GUCY2C, HAX1, HELLS, HMOX1, HPS1, HPS3, HPS4, HPS5, HPS6, HTRA2, HYOU1, ICOS, ICOSLG, IFIH1, IFNAR1, IFNAR2, IFNGR1, IFNGR2, IGLL1, IKBKB, IKZF1, IL10, IL10RA, IL10RB, IL12B, IL12RB1, IL12RB2, IL17F, IL17RA, IL17RC, IL18BP, IL1RN, IL21, IL21R, IL23R, IL2RA, IL2RB, IL2RG, IL36RN, IL6R, IL6ST, IL7R, IRAK4, IRF2BP2, IRF4, IRF7, IRF8, IRF9, ISG15, ITCH, ITGAM, ITGB2, ITK, JAGN1, JAK1, JAK3, KAT6A, KDM6A, KMT2A, KMT2D, LAMTOR2, LAT, LCK, LCT, LIG1, LIG4, LIPA, LPIN2, LRBA, LRRC8A, LYN, LYST, MAD2L2, MAGT1, MALT1, MAP3K14, MCM4, MEFV, MKL1, MOGS, MPLKIP, MS4A1, MSN, MTHFD1, MVK, MYD88, MYO5B, MYSM1, NBAS, NBN, NCF2, NCF4, NCKAP1L, NCSTN, NEUROG3, NFAT5, NFE2L2, NFKB1, NFKB2, NFKBIA, NHEJ1, NHP2, NLRC4, NLRP1, NLRP12, NLRP3, NOD2, NOP10, NSMCE3, OAS1, ORAI1, OSTM1, OTULIN, PARN, PAX1, PEPD, PGM3, PIK3CD, PIK3R1, PLCG2, PLVAP, PMM2, PNLIP, PNP, POLA1, POLD1, POLD2, POLE, POLE2, POLR3A, POLR3F, POMP, PRF1, PRKCD, PRKDC, PSENEN, PSMA3, PSMB4, PSMB8, PSMG2, PSTPIP1, PTPRC, RAB27A, RAC2, RAG1, RAG2, RANBP2, RASGRP1, RBCK1, REL, RELA, RELB, RFWD3, RFX5, RFXANK, RFXAP, RHOH, RIPK1, RMRP, RNASEH2A, RNASEH2B, RNASEH2C, RNF113A, RNF168, RNF31, RNU4ATAC, RORC, RPSA, RTEL1, SAMD9, SAMD9L, SAMHD1, SAR1B, SCO2, SEC61A1, SEMA3E, SERPING1, SGPL1, SH2D1A, SH3BP2, SH3KBP1, SI, SIAE, SKIV2L, SLC10A2, SLC26A3, SLC29A3, SLC35C1, SLC37A4, SLC39A7, SLC46A1, SLC51B, SLC5A1, SLC7A7, SLC9A3, SLX4, SMARCAL1, SMARCD2, SNX10, SP110, SPINK5, SPINT2, SPPL2A, SRP54, SRP72, STAT1, STAT2, STAT3, STAT4, STAT5B, STIM1, STK4, STN1, STX11, STX3, STXBP2, TAOK2, TAP1, TAP2, TAPBP, TAZ, TBX1, TCF3, TCIRG1, TCN2, TERC, TERT, TFRC, TGFB1, TGFB1R1, TGFB1R2, THBD, TICAM1, TIMM50, TINF2, TLR3, TLR7, TMC6, TMC8, TMEM173, TMPRSS15, TNFAIP3, TNFRSF11A, TNFRSF13B, TNFRSF13C, TNFRSF1A, TNFRSF4, TNFRSF6B, TNFRSF9, TNFSF11, TNFSF12, TONSL, TOP2B, TP63, TPP2, TRAF3, TRAF3IP2, TREX1, TRNT1, TTC37, TTC7A, TYK2, UNC13D, UNC45A, UNC93B1, UNG, USB1, VAV1, VPS13B, VPS45, WAS, WDR1, WIPF1, WNT2B,
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			WRAP53, XIAP, ZAP70, ZBTB24, ZCCHC8, ZNF341, MSH6, PMS2, PTEN, AK7, ARMC4, C11orf70, CCDC103, CCDC114, CCDC151, CCDC39, CCDC40, CCDC65, CCNO, CEP164, CFAP298, CFTR, DNAAF1, DNAAF2, DNAAF3, DNAAF4, DNAAF5, DNAH1, DNAH11, DNAH5, DNAH8, DNAH9, DNAI1, DNAI2, DNAJB13, DNAL1, DRC1, GAS8, LRRC56, LRRC6, MCIDAS, NOTCH2, OFD1, PIH1D3, RPGR, RSPH1, RSPH3, RSPH4A, RSPH9, SPAG1, ZMYND10
3	Дефіцит антитіл / Antibody Deficiencies	Агаммаглобулінемія - 36 генів	BLM, BLNK, BTK, CCBE1, CD19, CD27, CD79A, CD79B, CD81, CDC42, CDCA7, DNMT3B, FAT4, FNIP1, GATA2, HELLS, ICOSLG, IGLL1, IL2RB, IRF2BP2, IRF4, KMT2A, LIG1, LRRC8A, MOGS, MYSM1, OAS1, PIK3R1, SEC61A1, SH2D1A, SLC39A7, TCF3, TOP2B, TRNT1, XIAP, ZBTB24
		Загальний варіабельний імунодефіцит - 36 генів	ARHGEF1, ATP6AP1, CD19, CD27, CD81, CR2, CTLA4, CXCR4, DCLRE1C, ICOS, IKZF1, IL21, IL21R, IRF2BP2, JAK3, KDM6A, KMT2D, LRBA, MS4A1, NFKB1, NFKB2, NSMCE3, PIK3CD, PIK3R1, PLCG2, PRKCD, RAC2, RAG1, RAG2, SH3KBP1, STAT3, STXBP2, TNFRSF13B, TNFRSF13C, TNFSF12, VAV1
		Синдром гіпер IgE - 11 генів	CARD11, DOCK8, DSG1, ERBIN, IL6R, IL6ST, PGM3, SPINK5, STAT3, TYK2, ZNF341
		Синдром гіпер IgM - 9 генів	AICDA, CD40, CD40LG, PIK3CD, PIK3R1, UNG, BTK, IL2RG, SH2D1A
4	Автозапальні синдроми / Autoinflammatory Syndromes	Аутозапальні та аутоімунні синдроми - 156 генів	ACP5, ADA, ADA2, ADAM17, ADAR, AICDA, AIRE, ANKZF1, AP3B1, ARPC1B, ASAH1, BACH2, BLOC1S6, BTK, C17orf62, CARD14, CARD8, CASP10, CASP8, CCBE1, CD27, CD3G, CD40, CD40LG, COPA, CR2, CTLA4, CYBA, CYBB, DCLRE1C, DDX58, DEF6, DKC1, DNASE1L3, DNASE2, DOCK8, DSG1, DUOX2, ELANE, FADD, FAS, FASLG, FCHO1, FOXP3, G6PC3, ICOS, IFIH1, IL10, IL10RA, IL10RB, IL1RN, IL21, IL21R, IL2RA, IL2RB, IL2RG, IL36RN, IRF2BP2, ITCH, ITGAM, ITGB2, ITK, JAK1, LIG4, LPIN2, LRBA, LYN, LYST, MAGT1, MEFV, MVK, NCF2, NCF4, NFAT5, NFKB1, NFKB2, NFKBIA, NLR4, NLRP1, NLRP12, NLRP3, NOD2, OAS1, ORAI1, OTULIN, PEPD, PIK3CD, PIK3R1, PLCG2, PNP, POLA1, POMP, PRF1, PRKCD, PSMA3, PSMB4, PSMB8, PSMG2, PSTPIP1, RAB27A, RAC2, RAG1, RAG2, RASGRP1, RBCK1, RFX5, RFXANK, RFXAP, RIPK1, RMRP, RNASEH2A, RNASEH2B, RNASEH2C, RNF31, RTEL1, SAMHD1, SCO2, SH2D1A, SH3BP2, SI, SIAE, SKIV2L, SLC29A3, SLC37A4, SLC7A7, STAT1, STAT3, STAT4, STAT5B, STIM1, STX11, STXBP2, TBX1, TGFB1, TGFB1R1, TGFB2, TMEM173, TNFAIP3, TNFRSF11A, TNFRSF13B, TNFRSF13C, TNFRSF1A, TNFRSF6B, TNFSF12, TOP2B, TPP2, TREX1, TRNT1, TTC37, TTC7A, UNC13D, UNG, WAS, XIAP, ZAP70, ZNF341
		Сімейна середземноморська лихоманка - 1 ген	MEFV

		Моногенне запальне захворювання кишечника - 68 генів	ADA, ADAM17, AICDA, ANKZF1, ARPC1B, BACH2, BTK, C17orf62, CARD8, CARMIL2, CD3G, CD40, CD40LG, CD55, CTLA4, CYBA, CYBB, DCLRE1C, DKC1, DOCK8, DUOX2, FCHO1, FOXP3, G6PC3, ICOS, IL10, IL10RA, IL10RB, IL21, IL2RA, IL2RB, IL2RG, ITGB2, JAK1, LIG4, LRBA, MEFV, MVK, NCF2, NCF4, NFAT5, NLRC4, NOD2, PIK3CD, PIK3R1, PLCG2, POLA1, RAG1, RAG2, RIPK1, RTEL1, SH2D1A, SI, SKIV2L, SLC37A4, STAT1, STAT3, STIM1, STXBP2, TGFB1, TGFBR1, TGFBR2, TTC37, TTC7A, WAS, XIAP, ZAP70, ZNF341
		Синдроми періодичної лихоманки - 18 генів	ADA2, ASAH1, ELANE, LPIN2, MEFV, MVK, NLRC4, NLRP12, NLRP3, POMP, PSMA3, PSMB4, PSMB8, PSMG2, PSTPIP1, SCO2, TNFRSF1A, TRNT1
5	Комбінована Т/В-клітинна недостатність / Combined T / B Cell Deficiencies	Комплексний тяжкий комбінований імунodefіцит (SCID) та комбінований імунodefіцит (CID) - 130 генів	ACD, ADA, AK2, ARPC1B, ATM, B2M, BCL10, BCL11B, BLM, CARD11, CARMIL2, CCBE1, CD247, CD27, CD3D, CD3E, CD3G, CD40, CD40LG, CD8A, CDCA7, CHD7, CIITA, CORO1A, CTC1, CTPS1, CXCR4, DCLRE1C, DKC1, DNMT3B, DOCK2, DOCK8, EPG5, ERBIN, ERCC6L2, EXTL3, FAT4, FCHO1, FNIP1, FOXI3, FOXN1, HELLS, ICOS, ICOSLG, IKBKB, IKZF1, IL21, IL21R, IL2RG, IL6R, IL6ST, IL7R, ITK, JAK3, KDM6A, KMT2D, LAT, LCK, LIG1, LIG4, LRBA, MAGT1, MALT1, MAP3K14, MCM4, MSN, MTHFD1, MYSM1, NBN, NFE2L2, NFKBIA, NHEJ1, NHP2, NOP10, NSMCE3, ORAI1, PARN, PAX1, PGM3, PNP, POLD1, POLE, POLE2, PRKDC, PTPRC, RAC2, RAG1, RAG2, RELA, RELB, RFX5, RFXANK, RFXAP, RHOH, RMRP, RNF168, RNF31, RNU4ATAC, RTEL1, SEMA3E, SGPL1, SH2D1A, SKIV2L, SLC46A1, SMARCA1, SP110, SPINK5, STAT3, STAT5B, STIM1, STK4, STN1, TAP1, TAP2, TAPBP, TBX1, TCN2, TERC, TERT, TFRC, TINF2, TNFRSF4, TP63, TTC37, TTC7A, WAS, WIPF1, ZAP70, ZBTB24, ZNF341
6	Порушення імунної регуляції / Immune Dysregulation	Аутоімунні лімфопроліферативні захворювання (ALPS) - 13 генів	CASP10, CASP8, CTLA4, FADD, FAS, FASLG, ITK, MAGT1, PIK3CD, PIK3R1, PRKCD, RELA, STAT3
		Спадковий гемофагоцитарний лімфогістіозитоз (HLH) - 24 гена	ADA, AP3B1, AP3D1, BLOC1S6, BTK, CD27, GATA2, IL2RA, IL2RG, ITK, LYST, MAGT1, MVK, NLRC4, PNP, PRF1, RAB27A, SH2D1A, SLC7A7, STX11, STXBP2, UNC13D, WAS, XIAP
7	Вроджена діарея / Congenital Diarrhea	Вроджена діарея - 84 генів	ADA, ADAM17, AICDA, ALG6, ANKZF1, ARPC1B, BACH2, BTK, C17orf62, CARD8, CARMIL2, CD3G, CD40, CD40LG, CD55, CTLA4, CYBA, CYBB, CYP27A1, DCLRE1C, DEF6, DGAT1, DKC1, DOCK8, DUOX2, FCHO1, FOXP3, G6PC3, GUCY2C, ICOS, IL10, IL10RA, IL10RB, IL21, IL2RA, IL2RB, IL2RG, ITGB2, JAK1, LCT, LIG4, LIPA, LRBA, MEFV, MVK, MYO5B, NCF2, NCF4, NEUROG3, NFAT5, NLRC4, NOD2, PIK3CD, PIK3R1, PLCG2, POLA1, RAG1, RAG2, RIPK1, RTEL1, SAR1B, SH2D1A, SI, SKIV2L, SLC26A3, SLC37A4, SLC5A1, SLC9A3, SPINT2, STAT1, STAT3, STIM1, STX3, STXBP2, TGFB1, TGFBR1, TGFBR2, TTC37, TTC7A, UNC45A, WAS, XIAP, ZAP70, ZNF341
8	Дефекти фагоцитів / Phagocytic Defects	Дефекти фагоцитів, включаючи нейтропенію - 71 ген	ACTB, AK2, AP3B1, AP3D1, BTK, C17orf62, CD40, CD40LG, CDC42, CEBPE, CLPB, CSF2RA, CSF2RB, CSF3R, CTSC, CXCR2, CXCR4, CYBA, CYBB, DKC1, DNAJC21, EFL1, EIF2AK3, ELANE, FERMT3, FPR1, G6PC, G6PC3, G6PD, GATA2, GF11, GINS1, HAX1, HTRA2, HYOU1, ITGB2, JAGN1, KAT6A, LAMTOR2, LPIN2, LYST, MKL1, MSN, MTHFD1, NCF2, NCF4, PGM3, PMM2,



			RAB27A, RAC2, RMRP, SLC35C1, SLC37A4, SMARCD2, SPINK5, SRP54, SRP72, STAT3, STK4, TAZ, TCN2, TERT, TFRC, TIMM50, TNFSF12, USB1, VPS13B, VPS45, WAS, WDR1, WIPF1
9	Спадковий ангіоневротичний набряк / Hereditary Angioedema	Спадковий ангіоневротичний набряк - 4 гена	ANGPT1, F12, PLG, SERPING1
10	Дефіцити комплементу / Complement Deficiencies	Розлади дефіциту комплементу - 22 гена	C1QA, C1QB, C1QC, C1S, C2, C3, C5, C6, C7, C8A, C8B, C9, CD46, CD55, CD59, CFB, CFD, CFH, CFI, CFP, SERPING1, THBD