**Human protein (autoantigen) sets recognized by both Ig and E. coli-captured Ig from SAH livers**

|  |  |  |  |
| --- | --- | --- | --- |
| IgA | IgG | IgM | IgE |
| ACER2ACRCACSL6ACSS1ADAADH5AGTR1AK4AK6AKAP8LALKBH2AMD1ANAPC15ANKHD1ANKRD17ANKRD28ANP32AAP1G1AP3B1APIPAPMAPAPOBEC2APOHAQP5ARHGAP1ARHGAP4ARHGEF3ARHGEF39ARMC9ARPC4ASB17ASPHD2ASTLATAD2ATCAYATG10ATG13ATP5BATP5EATP6V1C1ATXN3B3GALT6B4GALT3BABAM1BACH1BC071784\_fragBC096236\_fragBCS1LBDH2BEGAINBhlhe22BIN1BOLA3BORABRAT1BRDTBT006925BZW2C11orf1C12orf10C12orf60C14orf166C15orf41C16orf58C16orf62C16orf70C17orf80C18orf23\_fragC1orf112C1orf43C1orf94C1QBPC1QL1C1QL3C1RLC4orf19C4orf22C5orf24C6orf182C8orf59CALRCAMK1GCAMK4CAPN6CARD9CASD1CASKCASQ2CASS4CATCCDC106CCDC14CCDC40CCDC9CCDC97CCL21CCNA1CCND3CCNDBP1CCR5CD209CD2BP2CD44CD52CDC23CDC42BPACDCA7LCDCP1CDCP2CDH12CDH13CDK9CDKN1ACDKN2BCDKN2DCDO1CDR2LCEACAM21CENPBCENPCCENPHCENPMCENPTCENPUCEP112CFHR5CFPCHCHD4CHMP4BCHRNA1CKBCKMCLEC2DCLEC4ECLEC7ACLLU1OSCLP1CLPBCLUAP1CMPK1CNNM1CNOT10CNSTCOBLL1COL26A1COL4A3BPCOL5A2COLEC10COMPCOMTCOPS7BCOPS8COQ7COX4I1CPSF4CREB1CREB3L3CRIP2CRLF2CRYBB3CSH1CSNK2BCT45A1CT45A3CTCFLCTRLCTTNCUTACWC27\_fragCYP20A1CYP4F11DAAM1DAPP1DBN1DBPDCAF8DCKDCTN3DEF6\_fragDEFB112DEFB129DEFB136DFFADGKGDGUOKDHRS2DHX32DIABLODMGDHDMP1DMRT2DNAJA3DNAJA4DNAJC30DPY19L3DRAP1DRC7DRICH1DTNBP1DUSP22\_fragDUSP6ECHDC3ECHS1ECI1ECSITEDEM2EEF1DEEF1DP3EEF2KEGFREIF2B5EIF3LELAVL3ELMO1ELP5EMDENOPH1EPHA8EPOEPS8L2ERBB3ERICH2ERP27ESM1ESRRGEXOSC7EXTL3F2F8A1FAM104BFAM114A1FAM120BFAM131BFAM131CFAM13AFAM156AFAM21AFAM29AFAM45AFAM9BFAM9CFASFAUFBXO2FBXO21FBXO38FCHO1FEM1BFEZF2FGF12FGF20FGFBP3FIGNL2FN3KFOLR2FPR3FSBPFUCA2FXYD5G6PDGAB1GABPB1GAR1GATSL2GCDHGCKGDAP1L1GDF11GGHGHRHGIMAP5GIT2GLB1GLI1GNA11GOLPH3GORASP1GPATCH1GPM6BGPN1GPTGRK7GSTA2GSTM3GSTM4GTF2A1LGTF2IGTPBP8GTSF1GUCY2FGYS1H1F0HACE1HCLS1HEATR3HELTHEMK1HEXAHIATL1HINFPHIST1H1AHLA-FHMGB2HNRNPCHOXB6HPCAL4HRASHRCHSCBHSF2HSP90B1HSPA6HSPB1HSPB6HTN3HVCN1IARSIBSPIDH1IDH3GIDI1IDUAIFFO1IFIT3IGLIKZF2IL32IL4I1IL5RAILF2ILVBLIMPDH1ING3INPP5AINPP5KIP6K1IQCF1IQUBIRX2IRX5IST1ITGB1BP2IZUMO4JHU18929JMJD6KANSL3KCNAB1KCNAB2KCNK17KCNRGKCTD17KDM4DKHDC1KIAA0040KIAA0513KIAA1429KJ898030KJ901255\_fragKJ901395KJ901766.1\_fragKLC4KLF7KLHDC4KLHDC7BKLHDC8AKRASKRT37KRTAP10-6KRTAP16-1KRTAP3-2LAP3LARP1\_fragLARP4LARS2LAX1LCE2CLDOC1LETM2LIMK1LIMK2LINC00305LINC01465LORLPLLRPAP1LSG1LTB4RLUC7LLY6DLYNLYSMD2MAGMAGEA6MAGEA8MAGEA9MAGEC2MAN2B1MAP3K7MAPK8IP2MAPRE1MASP1MATKMBTPS2MED22MED4MEIOCMETTL14METTL16MGAT4AMINK1MLF2MLST8MMP28MMRN2MMTAG2MRASMRPS27MS4A12MTBPMTERF4MTSS1LMTX3MYLKMYRIPMYT1N4BP1NAGKNAMPTNANSNAPGNCAPHNCLNCLNNCS1NDNNDRG4NDUFB11NDUFB2NDUFB5NDUFS1NEK11NFE2NFKB2NFKBIBNINJ1NLNNLRP13NLRP14NLRP5NME2NME7NMNAT3Nol3NOL3NOS1APNOSTRINNPM1NPPANPYNR2F1Nr2f6NSG1NSMCE2NTN4NUMBNUP107NUTM2GNXNNXPH2OBFC1OCLNOLIG3Onecut1OR10T2OR5H6OR9G1ORC4LOSBPL8OTUD6BOTX2P3H4PACSIN1PAF1PAFAH1B3PAIP1PAK3PAK4PAK7PANK3PARP8PATZ1PBDC1PBX1PBX4PCDH17PCDHB15PCMTD1PDE4DIPPDE8A\_fragPDIA2PDK1PDS5BPDXDC1PDZK1IP1PENKPEX10PFKFB4PGA4PGK1PGRMC1PHYHD1PI4K2APICK1PIM2PIP4K2CPLA2G2EPLD3PLEKHF2PLEKHJ1PLOD2PNKDPNMA2PNMA6APOGZPOLR2FPOLR2J2POTEEPPBPPPICPPM1GPPP4R3APPP6R2PPRC1PRELID3BPREX2PRKAR2BPRKCDBPPRKD2PRMT2PRMT3PRMT8PRPH2PRPSAP2PRR13PRRC2BPSMA3PSMC3PSMD5PTGES2PTGISPTMAPTMSPTPN12PTPN6PTRH2PTTG1PUDPPURAPURGQ6ir13\_fragRAB14RAB21RAB33ARAD23ARAD51DRALYRANGAP1RAP1GDS1RARARASGRP3RASL11BRASSF3RBAKDNRBM34RBPMS2RCHY1RDM1RFX8RHOARHOQRILPL2RIOK3RIPPLY1RLN3RNF157RNF25RNFT1ROBO3RPL13RPL36ALRPLP1RPS15ARPSARRAGDRRAS2RRP15RSPO4RSRP1RTN2RTN4IP1RUVBL2S100A7L2SAA2SAMD4A\_fragSARAFSARSSCML1SENP7SESTD1SETSFR1SGCDSGK2SGK494SH2D3ASH3BGRSH3GL2SHANK2SHCBP1SHFM1SIRT4SLAMF6SLC16A8SLC17A4SLC1A7SLC35E3SLC37A2SLC41A3SLC48A1SLC6A6SLC7A5SLC7A6OSSLX1ASMAD7SMAD9SMARCC2SMC5SMDT1SMOXSMYD5\_fragSNAI3SNRNP27SNRPFSORBS2SPACA7SPAG11ASPANXN2SPANXN3SPCS2SPNS3SPP1SRGNSRMSSRPK2SRSF11SSC5D\_fragST3GAL3STARD3NLSTARD7STAT4STBD1STK3STK31STK39SUFUSUGCTSULT2B1SUMO1Supt6hSUV39H2SUV420H1\_fragSYT10TAB2TARBP1TARBP2TAZTBC1D9BTBRG1TBX19TBX4TCIRG1TCN2TCP1TEKTEN1TERF2IPTESK1TEX101TEX33TFIP11TGIF2LYTGM1TGM2THY1TIGD1TIMM44TIRAPTLDC1TLE4TLK1TLR4TMEM101TMEM106BTMEM129TMEM154TMEM161BTMEM168\_fragTMEM222TMEM44TMSB4YTNFRSF14TNFRSF25TNK1TNNT2TOM1L2TONSLTP73TPD52L1TPK1TPTETRAPPC10TRAPPC12TSPAN18TSPAN7TSPY3TSR2TTC27TUBA3CTUBA8TUBBTULP3TYROBPTYW3U2AF1U2AF2U2SURPUBA5UBALD2UBE2D3UBE2R2UBE3AUBXN4UFD1LUNC45AUSO1USP14USP25USP4USP7VAMP3VCPVEGFBVMA21VPS16VWA3BVWA8VWA9WBP11WDR55WDR70\_fragWISP2XAGE1AXM\_006509802.2\_fragXPAXRCC4YARSYKT6YWHABYWHAQYWHAZZADH2ZBED4ZBTB7CZDHHC5ZDHHC9ZFPM2ZKSCAN3ZMAT4ZMYM3ZNF192P1\_fragZNF207ZNF225ZNF326ZNF330ZNF346ZNF415ZNF428ZNF460ZNF557ZNF843ZSWIM1 | AAMPAAR2AARSD1ABI1ABRABTB1ACER2ACRCACSL6ADH5AGTR1AHCYAHNAK2AK6AKAP8LALPPAMBNANAPC15ANKHD1ANKRD17ANP32AANXA10AOC2AP1G1AP3B1APMAPAPOBEC2APOHAPPL2ARHGAP1ARHGAP4ARHGEF3ARHGEF4ARMC9ARPC4ASCL4ASRGL1ASTLATCAYATF2ATG10ATP12AATP8B5P\_fragATXN3B3GALT6BAFFBC031259.1\_fragBC034142.1\_fragBC054893.1\_fragBC070352.1\_fragBC071784\_fragBC073937.1\_fragBC089413BC089418BC096236\_fragBCS1LBEGAINBhlhe22BIN1BOLLBORABRAT1BRDTBZW2C10orf62C12orf10C12orf60C14orf166C17orf80C1orf112C1orf94C1QBPC1QL1C1QL3C1QTNF2C1RLC4orf19C4orf22C6orf182C8orf59CACNG6CAMK1GCAMK4CASKCASQ1CASQ2CASS4CCDC106CCDC137CCDC178CCDC28ACCDC9CCDC97CCNA1CCNDBP1CCR5CD209CD44CDC27CDC42BPACDCA7LCDCP2CDH12CDH13CDKN2BCENPBCENPHCFHR5CHRNA1CKMCLEC7ACLLU1OSCLP1CLPBCLUAP1CMC4CNNM1CNOT10CNSTCOL26A1COL4A3BPCOMPCOMTCOPS8COQ7COX18CPSF3CPSF4CREB3L3CREBZFCRLF2CRNNCSNK2BCTCFLCTTNCUTACYB561A3CYP2E1CYP4F11DAAM1DAPP1DBN1DBPDCAF8DCKDEFB112DEFB129DEFB131DEFB132DENND5ADGKGDHRS2DHX32DIXDC1DMGDHDMP1DMRT2DMRT3DMRTB1DMTF1DNAJA4DNAJB5DNAJC11DNAJC6DPP3DRAP1DRC7DRICH1DTNBP1DUB3DUSP22\_fragE2f5ECE1ECHDC3ECI1ECSITEEF1DP3EEF2KEFCAB13EGFREIF2AK4EIF2B5EIF3LELMO1ELP5EMDENOPH1EPHA8EPOERCC8ERICH2ERP27ESM1ESRRGEXOSC7F8A1FAF1FAM117B\_fragFAM120BFAM124BFAM129AFAM131BFAM131CFAM13AFAM21AFAM29AFAM45AFAM9BFAM9CFASFBXO2FCGR2AFCHO1FCHSD2FEM1BFEZF2FGF12FGF20FIGNL2FOLR2FOXRED2FSBPG6PDGAB1GAR1GARSGATSL2GCDHGCKGDAP1L1GDPD5GGHGHRHGLB1GLI1GNA11GORASP1GP1BBGPM6BGPN1GPTGRK7GSNGSTA2GSTM4GTF2IGTSF1GUCY2FHACE1HAX1HCLS1HCRTHEATR3HERC3HIATL1HINFPHIST1H1AHIST1H2BCHNRNPCHPCAL4HRASHRCHSCBHSF2HSP90B1HSPA1AHSPA6HTN3HVCN1IARSIBSPICAM4IDH1IDH3GIDI1IDUAIFFO1IFIT5IGKIGLIL32INPP5AINPP5KIP6K1IQUBIRS4IRX2IRX5ISCUIST1ITGB1BP2IZUMO4JHU18929JMJD6JMJD7KANSL3KCNAB1KCNK17KCTD17KDM4DKIAA0040KIAA0408KIAA0513KIAA1429KIF19KJ898030KJ900918\_fragKJ901255\_fragKJ901395KJ901523KJ901766.1\_fragKLC4KLF7KLHDC4KLHDC7BKLHDC8AKRASKRBA2KRT37KRT85KRTAP10-6KRTAP3-2KRTAP6-3KV205LAGE3LARP4LAX1LCE1ELCE2CLDOC1LETM2LIMK1LIPMLPAR4LPLLRPAP1LSG1LTB4RLUC7LLYNLYSMD2MAFGMAGEA1MAGEA6MAGEA8MAGEA9MAGEC2MAGI1MAK16MAN2B1MAP2K2MAP3K10MAP4K1MAPK8IP2MAPRE1MARC2MASP1MATKMBIPMBTPS2MED4MEIS3METTL14METTL15METTL16MFFMIB2MINK1MMD2MMRN2MRASMRI1MRPL1MS4A12MTBPMTERF4MTMR14MTX3MYLIPMYRIPMYT1N4BP1NAGKNAMPTNAPGNCLNCLNNDNNDUFB11NDUFB2NEDD4LNFKB2NFKBIBNKAPLNLNNLRP13NLRP14NLRP5NME2Nol3NOL3NOS1APNOSTRINNOX1NPM1NPYNr2f6NRCAMNSG1NSMCE2NTN4NUDT11NUP107NUTM2GNXNNXPH2OBFC1OCEL1OCLNOGFOD3OGG1OLIG3Onecut1OR10T2OR9G1ORC4LOSTCP1OTUD6BP4HA3PACSIN1PAF1PAHPAIP1PAK3PAK4PAK7PALD1PANK3PARD3BPARP8PARS2PBDC1PBX1PBX4PCDH17PCDHA4PCDHB15PCMTD1PCSK7PDE1APDE8A\_fragPDIA2PDK1PDK2PDPK1PDXDC1PENKPEX10PFKFB4PGA3PGA4PGK1PI4K2APICK1PIK3R5PIP4K2CPKNOX1PLAAPMVKPNKDPNMA2PNMA6APOGZPOTEEPPICPPM1GPPP2R2BPPP2R3CPPP2R4\_fragPPP6R2PRDM15PREX2PRH1PRKAR2BPRKCDBPPRKCZPRMT2PRMT3PRMT8PRPH2PRPSAP2PRR13PRR16PSMA3PSMB6PSMC3PSMD5PTGES2PTGISPTMAPTMSPTPN6PTRH2PURARAB14RAB21RAB28RAD23ARALYRANGAP1RARARASGRP3RBAKDNRBM39RCHY1RDM1RFX8RHOARHOQRHOXF2RIC8ARLN3RNF25RNFT1RNPEPROBO3RPL36ALRPLP1RSPO4RTN4IP1RUVBL2SAA2SASH3SCLT1SENP7SESN2SESTD1SETSGK2SH2D3ASH3BGRSH3GL1SH3GL2SHCBP1SHFM1SIRPB1SIRT4SLAMF6SLC16A8SLC16A9SLC35E3SLC6A6SLC6A7SLC7A10SLC7A6OSSMAD7SMC5SMOXSMYD5\_fragSNAI3SNX33SOGA3SPAG11ASPANXN2SPANXN3SPNS3SPP1SRGNSRMSSRPK2SRSF11SRSF2SSBP1SSTST3GAL3STARD3NLSTARD7STAT4STK31STK38LSTK39STOX1STRA13SUCLG2SUFUSUMO1Supt6hTAB2TAPBPTARBP1TARBP2TAZTBC1D9BTBX19TBX4TCF7L1TCN2TCP1TEKTEN1TERF1TERF2IPTESK1TEX33TFIP11TGIF2LYTGM1TGM2THEMIS2\_fragTIGD1TIRAPTLE4TLK1TMEM106BTMEM116TMEM129TMEM130TMEM161BTMEM209TMEM222TMEM44TNFRSF14TNFRSF25TNK1TOM1L2TONSLTOP1MTTPK1TPM2TPSAB1TRAPPC10TRAPPC12TRGC1TRIM65TSPAN10TSR2TTC27TUBA3CTUBA8TUBBTUBB8TULP3TYW3U2AF1U2SURPUBALD2UBE2D3UBE2R2UBE3AUBXN4UFD1LUGT2B15UNC45AUSP32USP4USP7VCPVDAC1VRK2VWA8VWA9WBP11WDR55WISP2XM\_006509802.2\_fragXPOTXRN2YARSYIF1BYKT6YWHAQYWHAZZADH2ZBED4ZBTB47ZBTB7CZDHHC5ZDHHC9ZFPM2ZMAT4ZNF192P1\_fragZNF207ZNF225ZNF254ZNF326ZNF330ZNF428ZNF460ZNF598ZNF687ZNF746ZNF772ZNF843ZSWIM1 | A0jns7AAK1ABI1ABTB1ACCSACER2ACOT7ACRCACSBG1AFMAFMIDAGTR1AK094777.1\_fragAK2AK4ANAPC15ANKHD1ANKRD1ANP32AAP1B1APIPAPOBEC2APOC3APOC4APOHAPOL2ARAFARF6ARL17A\_fragARL4DARL8BARMC9ASB17ATCAYATG13ATICATRIPBABAM1BACH1BC002963BC073758BC073767BC089412.1\_fragBCAR3BCAS2BCS1LBEGAINBIDBMP7BMXBRAT1BZW2C11orf1C12orf60C16orf62C17orf62C1orf112C1orf43C1orf94C1QBPC2orf27AC4orf19C5orf24C8orf59C9orf16CAMK4CAMKK2CAPN6CAPSCarm1CASS4CCDC127CCDC9CCDC97CCND2CD44CD52CDC23CDCP1CDK9CDKN1ACDKN2BCDKN2DCEACAM21CENPUCHCHD4CHKBCHMP1ACKBCKMCKS2CLDN1CLEC4ECLUAP1CMC4CMPK1CNNM1CNSTCOL4A3BPCOX18CPA2CPOXCPTP\_fragCRELD1CSNK1ECSNK2BCUTACX3CR1CYB5D2CYP4F11DAAM1DAB1DAZ2DBN1DCAF8DCTN3DDCDEFB112DERL2DMP1DMRT2DPY30DRICH1DTD1DTNBP1DUSP6EAF1ECHDC1EEF1GEEF2EEF2KEGFREIF2B5EIF3LENOPH1EPHA8ERBB3ERICH2ERP27ESM1ETHE1EXTL3F2FAM129AFAM131BFAM131CFAM134CFAM21AFAM45AFAM84AFASFAUFBXO2FGF12FGF20FGFBP1FGGYFIGNL2FKBP7FOLR2FRMD8FTLGALK2GAP43GCHFRGCKGIMAP2GIT2GLULGNPDA1GRPEL2GSK3BGTF2IGTPBP3GTPBP8GTSF1GUK1HAX1HCLS1HEATR3HIATL1HK2HKDC1\_fragHMBSHPRHRASHRCHSCBHTRA4IDI1IFFO1IFI35IFIT3IFT22IGKIGLIKBKBIL32IP6K1IRF2BP1ITGB1BP2ITIH5JMJD6KCNAB1KCNAB2KCNIP3KEAP1KHKKIAA0513KJ898030KJ901215KJ901255\_fragKJ901517KJ901885KJ902696KJ904347\_fragKJ905802KJ905803KJ905804KJ905805KLF10KLF6KRASLARP4LDHDLDOC1LINC01126\_fragLORLPAR2LRRC43LYG1MAGEA11MAGEA8MAGEA9MAGEC2MAGI1MAP3K6MAP4MAPK8IP2MAPKAPK3MATKMED4MED7MEMO1MKNK1MPSTMTERF4MTHFD1MTURNMX2MYCLMYL4MYLKN4BP1NAGKNCS1NDFIP1NDNNDRG1\_fragNEK11NFE2L2NFKBIBNID2NIF3L1NKIRAS2NME2NME3Nol3NOL3NOSTRINNR1H3NUDT14NXPH2OR2T35OR4K5OR5D14OR9G1PACSIN1PAF1PANK3PATZ1PCK2PDIA2PFKMPGRMC1PHB2PHKG2PICK1PIGCPIP4K2CPKNOX1PLCD4PMS2P5PNPOPOLLPOLR2J2PPM1GPPP1R3CPRDX2PRLHRPRMT2PRMT3PRMT8PROSCPRPSAP1PRRC2BPRSS42PRUNE2PSMA3PSMB4PSMC3PSMD3PSMD5PTMAPTMSPTPREQDPRR3HDM2\_fragRAB14RAB33ARAB35RAB3DRAB8ARABL2BRACK1RAD23ARALYRANGAP1RAP1GDS1RASD2RASGRP3RBKSRBM34RBPMS2RHOARIPK2RNF24RPLP1RPP40RPS15ARRAGARRAGDRRAS2RRP15RSPO4RTN4RUVBL2S100A10S1PR5SAMD4A\_fragSAMD4BSAT1SCDSCGB1C2SCLT1SCXSDCBPSDHAF2SESN2SESTD1SETSFNSFXN1SGK1SH3BGRSHHSIGIRRSKAP2SLC16A8SLC1A5SLC41A3SLC6A6SLC7A5SLC7A6OSSMUG1SMYD5\_fragSNRNP27SNX33SPANXN2SPANXN3SPNS3SPP1SQSTM1SRGNSRMSSSBP1SSBP4SSC5D\_fragSTAC3STARD3NLSTK3SUDS3\_fragSUFUSupt6hSYF2SYT17TAGLNTAOK3TBC1D9BTCP10LTCP11TEX33TFGTGM1THOC1TK1TLE4TMEM39B\_fragTMEM40TMEM44TMEM51TNK2TPM2TPTETRAPPC12TRIM39TRIM51TRIM74TSC22D3TSPAN18TSPAN9TUBA1CTUBA8TXNDC15UBE2D4UBE2IUBE2R2UBE3AUHMK1USP25USP4USP7VAMP3VDAC1VWA7VWA8WBP11WBSCR27WDR55XRCC4YWHABZADH2ZC4H2ZCCHC12ZDHHC5ZFP64ZMYM3ZMYM6ZNF207ZNF428ZNF557 | BCS1LC1orf94CCR7CELF6COQ7CRYZDAZ2DDAH1DECR2DNAJB2EGFRELAVL4F2FAM109BFAM49BFTLHERPUD1HMBSKCNAB1KCNAB2KRTAP4-4LORMECRMTHFD1NME2NME4PLA2G6PRLHRPRRC2BQDPRQKIRABL2BRBM38RBMY1A1RUNDC3BSOHLH2SSBP1TAF9BVWA8YBX3ZADH2ZNF358 |