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| **InterPro-Domains** | **Detected Components** | **Reference Components** | **Matching Percentage** |
| **Chemokine receptor family** | {CXCL12,CCR6,CX3CR1,IL8RB,CCL19, CCR10,XCR1,CXCR3,CCR1,CCR2,CCR3, CCR4, CCR5,CXCR5,CCR7,CCR8,CCR9, CX3CL1} | {CXCR5,CCR10,XCR1,CCR1,CCR4, CCR5, CCR6,CCR7,CCR8,CCR9} | 100% |
| **G protein-coupled receptor, rhodopsin-like** | {CXCL12,CCR6,CX3CR1,IL8RB,CCL19, CCR10,XCR1,CXCR3,CCR1,CCR2,CCR3,CCR4, CCR5,CXCR5,CCR7,CCR8,CCR9, CX3CL1} |
| **GPCR, rhodopsin-like, 7TM** | {CXCL12,CCR6,CX3CR1,IL8RB,CCL19, CCR10,XCR1,CXCR3,CCR1,CCR2,CCR3,CCR4, CCR5,CXCR5,CCR7,CCR8,CCR9, CX3CL1} |
| **BLC2 family** | {BCL2L1,BCL2L2,BCL2L11,CASP3,BID,BAX, BAK1,BAD,CASP8,HRK,BCL2,TP53,CASP9, APAF1,BNIP3} | {BCL2L1,BCL2L2,BAX,BAK1,BOK,BCL2} | 83.3% |
| **BLC2-like** | {BCL2L1,BCL2L2,BCL2L11,CASP3,CASP1, FAS,BID,BAX,BAK1,BAD,BAG1,FASLG,TP53, FADD,NFKB1,APAF1,BCL2} |
| **Death effector domain** | {CASP4,CASP8,APAF1,FADD} | {CFLAR,CASP8,FADD} | 66.7% |
| **Interleukin-6 receptor alpha, binding** | {IL11,IL6RA,IL6ST} | {IL5RA,IL13RA1,IL6RA,IL6ST} | 50% |
| **Death domain** | {IL18,CASP1,CD40,TRADD,NFKB1,FADD, IL1A,IL1R1} | {NFKB1,TRADD,FADD} | 100% |
| **Apoptosis regulator, Bcl-2, BH2 motif, conserved site** | {TP63,BCL2L2,TP53,BAX,TP73,TP53BP2, BCL2L11,BCL2} | {BCL2L2,BCL2,BAK1,BAX} | 75% |
| **Chemokine interleukin-8-like domain** | {CCL2,CCL7,CCL4,CCL5,CCL9,CCR1,CCR2, CCR3,CCR5,CXCR3,CX3CL1,CCL20,CCL22, CCR10,CD40,CXCL11,CXCL10,CXCL12,IL18, CXCL2,CX3CR1,CCL17,CXCL9,PF4} | {CXCL1,CCL12,CCL22,CCL9,CCL4, CCL17,CXCL9,CCL19,CXCL6,CCL5, CX3CL1, CXCL11,CXCL12,CCL25,CCL24} | 60% |

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| **KEGG Pathway** | **Detected Components** | **Reference Components** | **Matching Percentage** |
| **Chemokine signaling pathway** | {CCL7,CX3CR1,CXCL6,IL8RB,CCR10,CCL9, XCR1,CXCR3,CX3CL1,CCR3,CCR4,PF4,CCR6,CCR8,CCR9,CXCL12} | {CCL2,CCL3,CCL6,CCL7,CCL4,CCL5, CCL9,CCR1,CCR2,CCR3,CCR4,CCR5, CCR6,CCR7,CCR8,CCR9,IL8RB,XCR1, CXCR3,CXCR5,CX3CL1,CCL20,CCL22, CCL25,CCL24,CCR10,NFKB1,CXCL11, CXCL10,CXCL12,CXCL1,CCL11,CCL12, CXCL2,CX3CR1,CCL17,CXCL9,CCL19, CXCL6,PF4} | 40% |
| **Cytokine-cytokine receptor interaction** | {CCL2,CCL7,CCL4,CCL5,CCL9,CCR1,CCR2, CCR3,CCR5,CXCR3,CX3CL1,CCL20,CCL22, CCR10,CD40,CXCL11,CXCL10,CXCL12,IL18, CXCL2,CX3CR1,CCL17,CXCL9,PF4} | {CCL3,TNFSF10,CD40LG,IL10RA,CCL4, CCL5,CCR7,IL6ST,CCR1,CCR2,CCR3, CCR4,CCR5,CCR6,IL1A,CCR8,CCR9, IL1B,IL1R2,IL1R1,LTBR,IL8RB,FAS,XCR1, CXCR3,CXCR5,CX3CL1,CCL20,CCL22, CCL25,TGFB1,IL5RA,TNFRSF1A,IFNG, CCR10,CD40,LTB,LTA,TNF,FASLG, TNFRSF11B,CXCL11,CXCL10,CXCL12, IL18,IL13RA1,CXCL2,TNFRSF1B,IL6RA, CX3CR1,IL2RG,IL10,IL11,IL13,IL15, CXCL9,IL4,IL5,IL3,CCL12,PF4} | 32.8% |
| **NOD-like receptor signaling pathway** | {CXCL2,BIRC3,RIPK2,NFKB1,IL1B,BCL10} | {CXCL1,IL18,CCL12,CXCL2,CASP1,CCL5,BIRC3,CASP8,NAIP2,XIAP,TNF,NFKB1, PYCARD,IL1B,RIPK2,CARD6} | 31.3% |
| **Apoptosis** | {CASP6,CASP7,TNFSF10,BCL2L11,CASP3, TNFRSF10B,FAS,CASP8,NAIP2,CFLAR, FASLG,FADD,APAF1} | {BCL2L1,TNFSF10,BAD,BIRC3,BAX, TNFRSF10B,CASP12,IL1A,IL1B,IL1R1, FAS,BID,TRADD,CFLAR,FADD,NFKB1, APAF1,TRAF2,DFFA,DFFB,TNF,FASLG, CASP6,CASP7,TP53,CASP3,TNFRSF1A, XIAP,CASP8,CASP9,IL3,BCL2} | 34.4% |
| **Autoimmune thyroid disease** | {CCL2,TGFB1,CRP,CXCL12,CD40LG,IL10, IL18,CD40,CCR1,IL4,FASLG,CCR5,NFKB1, CCL22} | {CD40LG,IL10,FAS,CD40,IL4,IL5,FASLG} | 71.4% |
| **Huntington's disease** | {TP63,BCL2L11,CASP3,HRK,TP73,CASP6, BAX,CASP8,APAF1,BNIP3} | {CASP3,BAX,CASP9,CASP8,APAF1} | 66.7% |
| **Systemic lupus erythematosus** | {TRAF4,CD40LG,CD40} | {CD40LG,IFNG,CD40,IL10,TNF} | 40% |
| **Asthma** | {IL13RA1,IL13,IL15,IL4,IL5,IL3} | {IL10,IL13,CD40,IL4,IL5,IL3,CD40LG, TNF} | 50% |
| **Intestinal immune network for IgA production** | {CD40LG,CD40,IL15} | {LTBR,TGFB1,CD40LG,IL10,CCR10, CD40,IL15,IL4,IL5,CCR9,CXCL12,CCL25} | 25% |
| **Cell adhesion molecules** | {NFKB1,CD40LG,ITGAM} | {ITGB2,CD40LG,CD40,ITGAM} | 50% |
| **Pathways in cancer** | {BCL2L1,BIRC3,BAX,XIAP,CRADD,BCL2L11, FAS,BID,TRADD,FADD,NFKB1,APAF1,TNF, FASLG,CASP2,CASP6,CASP7,TP53,CASP3, TNFRSF1A,CASP1,CASP8,CASP9,BCL2} | {BCL2L1,TGFB1,TRAF2,TRAF3,TP53, CASP3,FAS,BID,BIRC3,XIAP,CASP8, CASP9,BAD,FASLG,BAX,FADD,NFKB1, TRAF4,DAPK1,BCL2} | 70% |

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| **Molecular Function** | **Detected Components** | **Reference Components** | **Matching Percentage** |
| **Peptide receptor activity** | {CCL7,CX3CR1,CXCL6,IL8RB,CCR10,CCL9, XCR1,CXCR3,CX3CL1,CCR3,CCR4,PF4,CCR6, CCR8,CCR9,CXCL12} | {CCR6,CX3CR1,IL8RB,CCR10,XCR1, CXCR3,CCR1,CCR2,CCR5,CXCR5,CCR7, CCR3} | 58.3% |
| **Receptor activity** | {CXCL12,CCR6,CX3CR1,IL8RB,CCL19,CCR10, XCR1,CXCR3,CCR1,CCR2,CCR3,CCR4,CCR5, CXCR5,CCR7,CCR8,CCR9,CX3CL1} | {IL10RA,IL6ST,CCR1,CCR2,CCR3,CCR5, CCR6,CCR7,IL1R2,IL1R1,IL8RB,FAS, XCR1,CXCR3,CXCR5,ITGB2,CCR10, NFRSF1B,IL13RA1,IL6RA,CX3CR1, TNFRSF1A,IL2RG} | 52.2% |
| **Growth factor activity** | {IL13RA1,IL13,IL15,IL4,IL5,IL3} | {CXCL1,TGFB1,IL4,IL5,IL3} | 60% |
| **C-C chemokine binding** | {CCL19,CCR2,CCL25,CCR5} | {CCR1,CCR2,CCR5} | 66.7% |
| **Tumor necrosis factor receptor superfamily binding** | {LTBR,LTB,LTA} | {TRADD,LTB,LTA,CASP8,FADD} | 40% |
| **Death effector domain binding** | {CASP4,CASP8,APAF1,FADD} | {CFLAR,CASP8,FADD} | 66.7% |
| **Growth factor binding** | {IL11,IL6RA,IL6ST} | {IL10RA,IL6ST,IL6RA,IL2RG} | 50% |
| **Nucleic acid binding transcription factor activity** | {TP63,BCL2L2,TP53,BAX,TP73,TP53BP2, BCL2L11,BCL2} | {NFKB1,TP53,TP73,TP63} | 75% |
| **Chemokine activity** | {CCL2,CCL7,CCL4,CCL5,CCL9,CCR1,CCR2, CCR3,CCR5,CXCR3,CX3CL1,CCL20,CCL22, CCR10,CD40,CXCL11,CXCL10,CXCL12,IL18, CXCL2,CX3CR1,CCL17,CXCL9,PF4} | {CCL12,CCL6,CCL17,CXCL9,CCL9,PF4, CXCL10,CXCL11,CCL22} | 77.8% |

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| **Pfam Domains** | **Detected Components** | **Reference Components** | **Matching Percentage** |
| **7 transmembrane receptor, rhodopsin family** | {CXCL12,CCR6,CX3CR1,IL8RB,CCL19,CCR10, XCR1,CXCR3,CCR1,CCR2,CCR3,CCR4,CCR5, CXCR5,CCR7,CCR8,CCR9,CX3CL1} | {CCR6,CCR10,XCR1,CCR1,CCR4,CCR5, CXCR5,CCR7,CCR8,CCR9} | 100% |
| **Apoptosis regulator proteins, Bcl-2 family** | {BCL2L1,BCL2L2,BCL2L11,CASP3,CASP1, FAS,BID,BAX,BAK1,BAD,BAG1,FASLG,TP53,FADD,NFKB1,APAF1,BCL2} | {BCL2L1,BCL2L2,BAX,BAK1,BOK,BCL2} | 83.3% |
| **Death effector domain** | {CASP4,CASP8,APAF1,FADD} | {CFLAR,CASP8,FADD} | 66.7% |
| **Interleukin-6 receptor alpha chain, binding** | {IL11,IL6RA,IL6ST} | {IL5RA,IL13RA1,IL6RA,IL6ST} | 50% |
| **Small cytokines (intecrine/chemokine), interleukin-8 like** | {CCL2,CCL7,CCL4,CCL5,CCL9,CCR1,CCR2, CCR3,CCR5,CXCR3,CX3CL1,CCL20,CCL22, CCR10,CD40,CXCL11,CXCL10,CXCL12,IL18, CXCL2,CX3CR1,CCL17,CXCL9,PF4} | {CXCL1,CX3CL1,CCL12,CCL22,CCL9, CCL4,CCL17,CXCL9,CCL19,CXCL6,CCL5,CXCL11,CXCL12,CCL25,CCL24} | 53.3% |
| **Death domain** | {IL18,CASP1,CD40,TRADD,NFKB1,FADD, IL1A,IL1R1} | {NFKB1,TRADD,FADD} | 100% |

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| **Reactome Pathway** | **Detected Components** | **Reference Components** | **Matching Percentage** |
| **Activation of DNA fragmentation factor** | {CIDEB,DFFA,DFFB} | {DFFB,DFFA,CASP3} | 66.7% |
| **Interleukin-1 family precursors are cleaved by caspase-1** | {IL18,CCL2,CXCL2,CASP1,CD40,CCR1, NFKB1, CCL20,IL1B,IL1A,IL1R2} | {IL18,IL1B,CASP1} | 100% |
| **Downstream TCR signaling** | {CXCL2,BIRC3,RIPK2,NFKB1,IL1B,BCL10} | {NFKB1,RIPK2,BCL10} | 100% |
| **FasL/CD95L signaling** | {CASP6,CASP7,TNFSF10,BCL2L11,CASP3, TNFRSF10B,FAS,CASP8,NAIP2,CFLAR, FASLG,FADD,APAF1} | {FAS,FASLG,CASP8,FADD} | 100% |
| **Exocytosis of platelet alpha granule contents** | {TGFB1,CFD,PF4} | {TGFB1,CFD,PF4} | 100% |
| **IRAK4 is activated by autophosphorylation** | {IL1R1,IL1A,CXCL2,IL1R2,TOLLIP} | {IL1R1,IL1A,IL1B,TOLLIP} | 75% |
| **Beta defensins** | {CCL19,CCR2,CCL25,CCR5} | {CCR2,CCR5,CCR6} | 66.7% |
| **TRAIL signaling** | {CASP4,CASP8,APAF1,FADD} | {CFLAR,CASP8,FADD} | 66.7% |
| **Interleukin-1 processing** | {IL18,CASP1,CD40,TRADD,NFKB1,FADD, IL1A,IL1R1} | {IL18,NFKB1,IL1B,CASP1} | 75% |
| **FASL:FAS Receptor Trimer, FADD complex** | {TRAF3,FAS,BIRC3,TRADD,CRADD,CFLAR, FASLG,FADD,BCL10} | {FAS,FASLG,FADD} | 100% |