

CD4\_SP\_THYMOCYTE\_UP, GSE31082\_DN\_VS\_CD4\_SP\_THYMOCYTE\_UP

GSE7568\_IL4\_VS\_IL4\_AND\_TGFB\_TREATED\_MACROPHAGE\_24H\_DN, GSE7568\_IL4\_VS\_IL4\_AND\_TGFB\_TREATED\_MACROPHAGE\_24H\_DN  
GSE31082\_DP\_VS\_CD4\_SP\_THYMOCYTE\_UP, GSE31082\_DP\_VS\_CD4\_SP\_THYMOCYTE\_UP  
GSE2770\_UNTREATED\_VS\_IL4\_TREATED\_ACT\_CD4\_TCELL\_48H\_DN, GSE2770\_UNTREATED\_VS\_IL4\_TREATED\_ACT\_CD4\_TCELL\_48H\_DN  
GSE14413\_UNSTIM\_VS\_IFNB\_STIM\_NIH3T3\_CELLS\_DN, GSE14413\_UNSTIM\_VS\_IFNB\_STIM\_NIH3T3\_CELLS\_DN  
GSE7460\_CD8\_TCELL\_VS\_TREG\_ACT\_DN, GSE7460\_CD8\_TCELL\_VS\_TREG\_ACT\_DN  
GSE27786\_NEUTROPHIL\_VS\_MONO\_MAC\_DN, GSE27786\_NEUTROPHIL\_VS\_MONO\_MAC\_DN  
GSE5679\_PPARG\_LIGAND\_ROSGLITAZONE\_VS\_RARA\_AGONIST\_AM580\_TREATED\_DC\_UP, GSE5679\_PPARG\_LIGAND\_ROSGLITAZONE\_VS\_RARA\_AGONIST\_AM580\_TREATED\_DC\_UP  
GSE10239\_NAIVE\_VS\_KIRGININT\_EFF\_CD8\_TCELL\_DN, GSE10239\_NAIVE\_VS\_KIRGININT\_EFF\_CD8\_TCELL\_DN  
GSE27786\_LSK\_VS\_CD4\_TCELL\_UP, GSE27786\_LSK\_VS\_CD4\_TCELL\_UP  
GSE8685\_IL2\_STARVED\_VS\_IL15\_ACT\_IL2\_STARVED\_CD4\_TCELL\_DN, GSE8685\_IL2\_STARVED\_VS\_IL15\_ACT\_IL2\_STARVED\_CD4\_TCELL\_DN  
GSE3039\_ALPHABETA\_CD8\_TCELL\_VS\_B2\_BCELL\_DN, GSE3039\_ALPHABETA\_CD8\_TCELL\_VS\_B2\_BCELL\_DN  
GSE9239\_CTRL\_VS\_TNF\_INHIBITOR\_TREATED\_DC\_DN, GSE9239\_CTRL\_VS\_TNF\_INHIBITOR\_TREATED\_DC\_DN  
GSE7460\_CTRL\_VS\_TGFB\_TREATED\_ACT\_FOXP3\_HET\_TCONV\_UP, GSE7460\_CTRL\_VS\_TGFB\_TREATED\_ACT\_FOXP3\_HET\_TCONV\_UP  
GSE45365\_NK\_CELL\_VS\_BCELL\_UP, GSE45365\_NK\_CELL\_VS\_BCELL\_UP  
UDAYAKUMAR\_MEDI\_TARGETS\_UP, UDAYAKUMAR\_MEDI\_TARGETS\_UP  
GSE2770\_UNTREATED\_VS\_IL12\_TREATED\_ACT\_CD4\_TCELL\_48H\_DN, GSE2770\_UNTREATED\_VS\_IL12\_TREATED\_ACT\_CD4\_TCELL\_48H\_DN  
GSE40068\_CXCR5NEG\_BCL6NEG\_CD4\_TCELL\_VS\_CXCR5POS\_BCL6NEG\_TFH\_UP, GSE40068\_CXCR5NEG\_BCL6NEG\_CD4\_TCELL\_VS\_CXCR5POS\_BCL6NEG\_TFH\_UP  
REACTOME\_RESOLUTION\_OF\_SISTER\_CHROMATID\_COHESION, REACTOME\_RESOLUTION\_OF\_SISTER\_CHROMATID\_COHESION  
GSE17721\_POLYIC\_VS\_CPG\_0.5H\_BMDC\_DN, GSE17721\_POLYIC\_VS\_CPG\_0.5H\_BMDC\_DN  
REACTOME\_RHO\_GTPASES\_ACTIVATE\_FORMINS, REACTOME\_RHO\_GTPASES\_ACTIVATE\_FORMINS  
GSE17721\_CPG\_VS\_GARDIQUIMOD\_8H\_BMDC\_UP, GSE17721\_CPG\_VS\_GARDIQUIMOD\_8H\_BMDC\_UP  
GSE8921\_UNSTIM\_VS\_TLR1\_2\_STIM\_MONOCYTE\_4H\_DN, GSE8921\_UNSTIM\_VS\_TLR1\_2\_STIM\_MONOCYTE\_4H\_DN  
GOBP\_TRANSCRIPTION\_INITIATION\_FROM\_RNA\_POLYMERASE\_II\_PROMOTER, GOBP\_TRANSCRIPTION\_INITIATION\_FROM\_RNA\_POLYMERASE\_II\_PROMOTER  
GSE11924\_TFH\_VS\_TH1\_CD4\_TCELL\_DN, GSE11924\_TFH\_VS\_TH1\_CD4\_TCELL\_DN  
GSE7460\_FOXP3\_MUT\_VS\_WT\_ACT\_WITH\_TGFB\_TCONV\_UP, GSE7460\_FOXP3\_MUT\_VS\_WT\_ACT\_WITH\_TGFB\_TCONV\_UP  
GSE10273\_HIGH\_IL7\_VS\_HIGH\_IL7\_AND\_IRF4\_IRF4\_8\_NULL\_PRE\_BCELL\_UP, GSE10273\_HIGH\_IL7\_VS\_HIGH\_IL7\_AND\_IRF4\_IRF4\_8\_NULL\_PRE\_BCELL\_UP  
GSE13484\_12H\_VS\_3H\_YF17D\_VACCINE\_STIM\_PBMCDN, GSE13484\_12H\_VS\_3H\_YF17D\_VACCINE\_STIM\_PBMCDN  
GSE37301\_MULTIPOTENT\_PROGENITOR\_VS\_RAG2\_KO\_NK\_CELL\_DN, GSE37301\_MULTIPOTENT\_PROGENITOR\_VS\_RAG2\_KO\_NK\_CELL\_DN  
GSE29614\_DAY3\_VS\_DAY7\_TIV\_FLU\_VACCINE\_PBMCDN, GSE29614\_DAY3\_VS\_DAY7\_TIV\_FLU\_VACCINE\_PBMCDN  
REACTOME\_VIRAL\_MESSENGER\_RNA\_SYNTHESIS, REACTOME\_VIRAL\_MESSENGER\_RNA\_SYNTHESIS  
GOMF\_UBIQUITIN\_BINDING, GOMF\_UBIQUITIN\_BINDING  
GSE29614\_CTRL\_VS\_DAY7\_TIV\_FLU\_VACCINE\_PBMCDN, GSE29614\_CTRL\_VS\_DAY7\_TIV\_FLU\_VACCINE\_PBMCDN  
MORF\_RAB11A, MORF\_RAB11A  
GSE22282\_HYPOMIA\_VS\_NORMOXIA\_MYELOID\_DC\_UP, GSE22282\_HYPOMIA\_VS\_NORMOXIA\_MYELOID\_DC\_UP  
GSE17721\_CTRL\_VS\_LPS\_12H\_BMDC\_DN, GSE17721\_CTRL\_VS\_LPS\_12H\_BMDC\_DN  
ZNF595\_TARGET\_GENES, ZNF595\_TARGET\_GENES  
HYSTRYKH\_HEMATOPOIESIS\_STEM\_CELL\_AND\_BRAIN\_QTL\_TRANS, HYSTRYKH\_HEMATOPOIESIS\_STEM\_CELL\_AND\_BRAIN\_QTL\_TRANS  
GOBP\_REGULATION\_OF\_DNA\_REPLICATION, GOBP\_REGULATION\_OF\_DNA\_REPLICATION  
GOBP\_RNA\_PHOSPHODIESTER\_BOND\_HYDROLYSIS\_EXONUCLEOLYTIC, GOBP\_RNA\_PHOSPHODIESTER\_BOND\_HYDROLYSIS\_EXONUCLEOLYTIC  
GOMF\_3\_5\_EXONUCLEASE\_ACTIVITY, GOMF\_3\_5\_EXONUCLEASE\_ACTIVITY  
GOMF\_EXONUCLEASE\_ACTIVITY\_ACTIVE\_WITH\_EITHER\_RIBO\_OR\_DEOXYRIBONUCLEIC\_ACIDS\_AND\_PRODUCING\_5\_PHOSPHOMONOESTERS, GOMF\_EXONUCLEASE\_ACTIVITY\_ACTIVE\_WITH\_EITHER\_RIBO\_OR\_DEOXYRIBONUCLEIC\_ACIDS\_AND\_PRODUCING\_5\_PHOSPHOMONOESTERS  
GOBP\_PROTEIN\_MONOUBIQUITINATION, GOBP\_PROTEIN\_MONOUBIQUITINATION  
GSE21670\_TGFB\_VS\_IL6\_TREATED\_CD4\_TCELL\_DN, GSE21670\_TGFB\_VS\_IL6\_TREATED\_CD4\_TCELL\_DN  
GSE24210\_IL35\_TREATED\_VS\_UNTREATED\_TCONV\_CD4\_TCELL\_DN, GSE24210\_IL35\_TREATED\_VS\_UNTREATED\_TCONV\_CD4\_TCELL\_DN  
GSE17721\_LPS\_VS\_CPG\_24H\_BMDC\_UP, GSE17721\_LPS\_VS\_CPG\_24H\_BMDC\_UP  
GSE11961\_GERMINAL\_CENTER\_BCELL\_DAY7\_VS\_PLASMA\_CELL\_DAY7\_UP, GSE11961\_GERMINAL\_CENTER\_BCELL\_DAY7\_VS\_PLASMA\_CELL\_DAY7\_UP  
GOMF\_EXORIBONUCLEASE\_ACTIVITY, GOMF\_EXORIBONUCLEASE\_ACTIVITY  
HP\_FASCICULATIONS, HP\_FASCICULATIONS  
REACTOME\_POSTMITOTIC\_NUCLEAR\_PORE\_COMPLEX\_NPC\_REFORMATION, REACTOME\_POSTMITOTIC\_NUCLEAR\_PORE\_COMPLEX\_NPC\_REFORMATION  
GOBP\_MATURATION\_OF\_5\_8S\_RRNA, GOBP\_MATURATION\_OF\_5\_8S\_RRNA  
MIR4698\_5P, MIR4698\_5P  
GOBP\_HISTONE\_UBIQUITINATION, GOBP\_HISTONE\_UBIQUITINATION  
HUMMEL\_BURKITT'S\_LYMPHOMA\_UP, HUMMEL\_BURKITT'S\_LYMPHOMA\_UP  
HP\_ABNORMAL\_PULMONARY\_INTERSTITIAL\_MORPHOLOGY, HP\_ABNORMAL\_PULMONARY\_INTERSTITIAL\_MORPHOLOGY  
GSE19888\_ADENOSINE\_A3R\_ACT\_VS\_TCELL\_MEMBRANES\_ACT\_AND\_A3R\_INH\_PRETREAT\_IN\_MAST\_CELL\_UP, GSE19888\_ADENOSINE\_A3R\_ACT\_VS\_TCELL\_MEMBRANES\_ACT\_AND\_A3R\_INH\_PRETREAT\_IN\_MAST\_CELL\_UP  
GSE8921\_UNSTIM\_0H\_VS\_TLR1\_2\_STIM\_MONOCYTE\_24H\_UP, GSE8921\_UNSTIM\_0H\_VS\_TLR1\_2\_STIM\_MONOCYTE\_24H\_UP  
HP\_CLUBBING, HP\_CLUBBING  
REACTOME\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES, REACTOME\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES  
MIR6787\_3P, MIR6787\_3P  
GOBP\_CLEAVAGE\_INVOLVED\_IN\_RRNA\_PROCESSING, GOBP\_CLEAVAGE\_INVOLVED\_IN\_RRNA\_PROCESSING  
BENITEZ\_CBM\_PROTEASOME\_INHIBITION\_RESPONSE, BENITEZ\_CBM\_PROTEASOME\_INHIBITION\_RESPONSE  
GOBP\_RRNA\_CATABOLIC\_PROCESS, GOBP\_RRNA\_CATABOLIC\_PROCESS  
GOCC\_EXORIBONUCLEASE\_COMPLEX, GOCC\_EXORIBONUCLEASE\_COMPLEX  
MIR4699\_5P, MIR4699\_5P  
MORF\_PTEIN, MORF\_PTEIN  
REACTOME\_TRANSCRIPTIONAL\_ACTIVITY\_OF\_SMAD2\_SMAD3\_SMAD4\_HETEROTRIMER, REACTOME\_TRANSCRIPTIONAL\_ACTIVITY\_OF\_SMAD2\_SMAD3\_SMAD4\_HETEROTRIMER  
WP\_EUKARYOTIC\_TRANSCRIPTION\_INITIATION, WP\_EUKARYOTIC\_TRANSCRIPTION\_INITIATION  
HP\_ABNORMAL\_VENOUS\_MORPHOLOGY, HP\_ABNORMAL\_VENOUS\_MORPHOLOGY  
MIR660\_3P, MIR660\_3P  
GOBP\_MATURATION\_OF\_5\_8S\_RRNA\_FROM\_TRICISTRONIC\_RRNA\_TRANSCRIPT\_SSU\_RRNA\_5\_8S\_RRNA\_LSU\_RRNA, GOBP\_MATURATION\_OF\_5\_8S\_RRNA\_FROM\_TRICISTRONIC\_RRNA\_TRANSCRIPT\_SSU\_RRNA\_5\_8S\_RRNA\_LSU\_RRNA  
CHENG\_RESPONSE\_TO\_NICKEL\_ACETATE, CHENG\_RESPONSE\_TO\_NICKEL\_ACETATE  
WP\_TRANSULFURATION\_AND\_ONE\_CARBON\_METABOLISM, WP\_TRANSULFURATION\_AND\_ONE\_CARBON\_METABOLISM  
MODULE\_332\_MODULE\_332  
GOMF\_PRENLYTRANSFERASE\_ACTIVITY, GOMF\_PRENLYTRANSFERASE\_ACTIVITY  
MIR7851\_3P, MIR7851\_3P  
HP\_NEONATAL\_RESPIRATORY\_DISTRESS, HP\_NEONATAL\_RESPIRATORY\_DISTRESS  
WP\_PURINE\_METABOLISM\_AND\_RELATED\_DISORDERS, WP\_PURINE\_METABOLISM\_AND\_RELATED\_DISORDERS  
GOBP\_MICROTUBULE\_POLYMERIZATION, GOBP\_MICROTUBULE\_POLYMERIZATION  
GOBP\_HORMONE\_MEDIATED\_SIGNALING\_PATHWAY, GOBP\_HORMONE\_MEDIATED\_SIGNALING\_PATHWAY  
REACTOME\_NOTCH\_HLH\_TRANSCRIPTION\_PATHWAY, REACTOME\_NOTCH\_HLH\_TRANSCRIPTION\_PATHWAY  
HP\_WIDELY\_SPACED\_TEETH, HP\_WIDELY\_SPACED\_TEETH  
REACTOME\_SMAD2\_SMAD3\_SMAD4\_HETEROTRIMER\_REGULATES\_TRANSCRIPTION, REACTOME\_SMAD2\_SMAD3\_SMAD4\_HETEROTRIMER\_REGULATES\_TRANSCRIPTION  
GSE17721\_LPS\_VS\_GARDIQUIMOD\_1H\_BMDC\_UP, GSE17721\_LPS\_VS\_GARDIQUIMOD\_1H\_BMDC\_UP  
MIR1285\_5P, MIR1285\_5P  
IWANAGA\_CARCIINOGENESIS\_BY\_KRAS\_PTEIN\_UP, IWANAGA\_CARCIINOGENESIS\_BY\_KRAS\_PTEIN\_UP  
HP\_MICROCORNIA, HP\_MICROCORNIA  
GOBP\_TRANSCRIPTION\_PREINITIATION\_COMPLEX\_ASSEMBLY, GOBP\_TRANSCRIPTION\_PREINITIATION\_COMPLEX\_ASSEMBLY  
MIR4695\_5P, MIR4695\_5P  
VECCHI\_GASTRIC\_CANCER\_ADVANCED\_VS\_EARLY\_DN, VECCHI\_GASTRIC\_CANCER\_ADVANCED\_VS\_EARLY\_DN  
GOCC\_MICROTUBULE\_END, GOCC\_MICROTUBULE\_END  
HP\_MOTOR\_POLYNEUROPATHY, HP\_MOTOR\_POLYNEUROPATHY  
GOBP\_RNA\_CAPPING, GOBP\_RNA\_CAPPING  
HP\_APLASIA\_HYPOPLASIA\_OF\_THE\_SPLEEN, HP\_APLASIA\_HYPOPLASIA\_OF\_THE\_SPLEEN  
HP\_DRY\_SKIN, HP\_DRY\_SKIN  
GOBP\_POSITIVE\_REGULATION\_OF\_PROTEIN\_TARGETING\_TO\_MITOCHONDRION, GOBP\_POSITIVE\_REGULATION\_OF\_PROTEIN\_TARGETING\_TO\_MITOCHONDRION  
MIR6807\_5P, MIR6807\_5P  
HP\_PRODUCTIVE\_COUGH, HP\_PRODUCTIVE\_COUGH  
GOBP\_EXIT\_FROM\_MITOSIS, GOBP\_EXIT\_FROM\_MITOSIS  
HP\_ABNORMAL\_SPERM\_MOTILITY, HP\_ABNORMAL\_SPERM\_MOTILITY  
BROWNE\_HCMV\_INFECTION\_30MIN\_DN, BROWNE\_HCMV\_INFECTION\_30MIN\_DN  
GOMF\_TBP\_CLASS\_PROTEIN\_BINDING, GOMF\_TBP\_CLASS\_PROTEIN\_BINDING  
GOBP\_NEGATIVE\_REGULATION\_OF\_DNA\_DEPENDENT\_DNA\_REPLICATION, GOBP\_NEGATIVE\_REGULATION\_OF\_DNA\_DEPENDENT\_DNA\_REPLICATION  
REACTOME\_MRNA\_DECAY\_BY\_3\_TO\_5\_EXORIBONUCLEASE, REACTOME\_MRNA\_DECAY\_BY\_3\_TO\_5\_EXORIBONUCLEASE  
REACTOME\_KSRP\_BINDS\_AND\_DESTABILIZES\_MRNA, REACTOME\_KSRP\_BINDS\_AND\_DESTABILIZES\_MRNA  
HP\_HYPOMIMIC\_FACE, HP\_HYPOMIMIC\_FACE  
GOMF\_UBIQUITIN\_LIKE\_PROTEIN\_SPECIFIC\_PROTEASE\_ACTIVITY, GOMF\_UBIQUITIN\_LIKE\_PROTEIN\_SPECIFIC\_PROTEASE\_ACTIVITY  
GOBP\_POSITIVE\_REGULATION\_OF\_TRANSLATIONAL\_INITIATION, GOBP\_POSITIVE\_REGULATION\_OF\_TRANSLATIONAL\_INITIATION  
HP\_BRONCHITIS, HP\_BRONCHITIS  
GOMF\_K63\_LINKED\_POLYUBIQUITIN\_MODIFICATION\_DEPENDENT\_PROTEIN\_BINDING, GOMF\_K63\_LINKED\_POLYUBIQUITIN\_MODIFICATION\_DEPENDENT\_PROTEIN\_BINDING  
GOBP\_PTERIDINE\_CONTAINING\_COMPOUND\_METABOLIC\_PROCESS, GOBP\_PTERIDINE\_CONTAINING\_COMPOUND\_METABOLIC\_PROCESS  
GSE17721\_POLYIC\_VS\_CPG\_0.5H\_BMDC\_UP, GSE17721\_POLYIC\_VS\_CPG\_0.5H\_BMDC\_UP  
WP\_FLUOROPYRIMIDINE\_ACTIVITY, WP\_FLUOROPYRIMIDINE\_ACTIVITY  
GOBP\_MICROTUBULE\_NUCLEATION, GOBP\_MICROTUBULE\_NUCLEATION  
GOMF\_UBIQUITINATION\_LIKE\_MODIFICATION\_DEPENDENT\_PROTEIN\_BINDING, GOMF\_