

M1 UpD0 UpD6 Quiescence Vesicle SerumResponse

M6 UpD0 UpD6 ZincFinger

M3 UpD0-D3.0h MYD88_INF ZincFinger

M2 UpD0-D3.6h IRF4_Induced NFkB_Signalling

M11 UpD0 Bcell ZincFinger

M5 UpD0 UpD6 PeptideChainElongation

M13 UpD0 UpD3.3h LU_EZH2_TARGETS_DN

M20 Novel2

M14 UpD3-D4 StemLike

M10 UpD3-D4 RUNX1_NFKB_STAT5A InflammatoryResponse SterolBiosynthesis

M19 UpD3 AminoAcidDeprivation MTORC1 MM-CD-Subgroup

M12 UpD5on PlasmaCell ER Golgi

M8 UpD5on PlasmaCell ER Golgi UPR_XBP1

M17 UpD5on PlasmaCell ER Golgi XBP1

M4 UpD3-D5 MYC CellCycle Mitochondria MitochondrialRibosome

M7 UpD3-D5 MYC CellCycle Mitochondria Ribosome

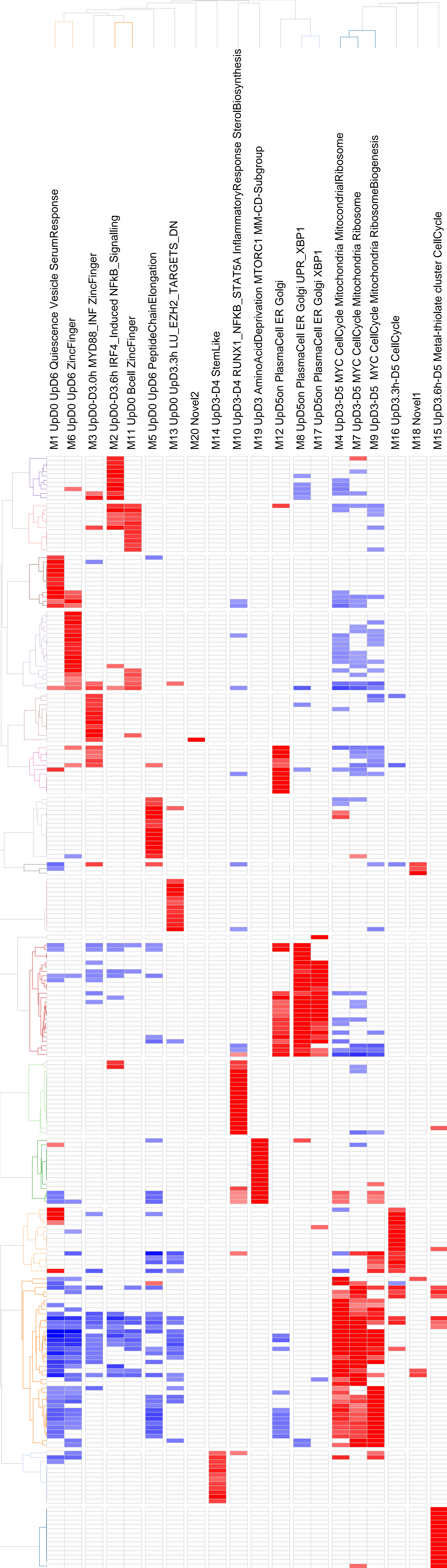
M9 UpD3-D5 MYC CellCycle Mitochondria RibosomeBiogenesis

M16 UpD3.3h-D5 CellCycle

M18 Novel1

M15 UpD3.6h-D5 Metal-thiolate cluster CellCycle

File1/File2



GNF2 EIF356 MsiDb C4
 CHNG MULTIPLE MYELOMA HYPERPLIQUID UP MsiDb C2
 GGGNNTTCC NFKB_Q6_01 MsiDb C3
 GSE20727 CTRL VS H2O2 TREATED DC UP MsiDb C7
 GSE2914 DAY3 VS DAY7 UNTREATED MELANOMA UP MsiDb C7
 GSE1460 DP THYMOCYTE VS NAIVE CD4 TCELL ADULT BLOOD DN MsiDb C7
 GSE13411 IGM MEMORY BCELL VS PLASMA CELL UP MsiDb C7
 GSE13411 PLASMA CELL VS MEMORY BCELL DN MsiDb C7
 GSE13411 SWITCHED MEMORY BCELL VS PLASMA CELL UP MsiDb C7
 GSE22886 IGG_IGA_MEMORY_BCELL VS BLOOD_PLASMA_CELL_UP_M22886_C7
 GSE10325 CD4 TCELL VS BCELL DN MsiDb C7
 GSE13411 NAIVE BCELL VS PLASMA CELL UP MsiDb C7
 GSE22886 NAIVE BCELL VS BM PLASMA CELL UP MsiDb C7
 GSE22886 IGM MEMORY BCELL VS BLOOD_PLASMA_CELL_UP_MsiDb_C7
 GSE22886 NAIVE VS IGG_IGA_MEMORY_BCELL_UP_MsiDb_C7
 GSE3882 BCELL VS MCELL UP MsiDb C7
 GSE22886 CD8 TCELL VS BCELL NAIVE DN MsiDb C7
 GSE22886 NAIVE VS IGM_MEMORY_BCELL_UP_MsiDb_C7
 GSE4606 IRFHIGH VS WT CD8IL12_IL5_DAY1_STIMULATED_BCELL_UP_MsiDb_C7
 GSE22886 NAIVE_BCELL_VS_DC_UP_MsiDb_C7
 BLALOCK ALZHEIMERS DISEASE UP MsiDb C2
 GSE16385 MONOCYTE VS 12H IL4 TREATED MACROPHAGE DN MsiDb C7
 GNF2 CTRN MsiDb C4
 GSE24671 CTRL VS SENDAI VIRUS INFECTED MOUSE SPLENOCYTES DN MsiDb C7
 ChicheiPMID:2464022-2014_M6.10_PAPER
 GSE22968 CTRL VS D3 TRANSDUCED CD8 TCELL UP MsiDb C7
 SCHLOSSER SERUM RESPONSE UP MsiDb C2
 MODULE_630 MsiDb C4
 GSE6269 HEALTHY VS E COLI INF PBMC UP MsiDb C7
 GSE24634 TEFF VS TCONV DAYS IN CULTURE DN MsiDb C7
 GSE21360 PRIMARY VS QUATERNARY MEMORY CD8 TCELL DN MsiDb C7
 Quiescence_home_all (PMID:15075390), SignatureDB
 Blood_Module-3.8_Undetermined (PMID:18631456), SignatureDB
 GSE13738 RESTING VS TCR_ACTIVATED CD4 TCELL UP MsiDb C7
 GSE36476 CTRL VS TSST AT 40H MEMORY CD4 TCELL YOUNG UP MsiDb C7
 GSE16450 IMMATURE VS MATURE NEURON CELL LINE UP MsiDb C7
 GSE36476 CTRL VS TSST ACT 72H MEMORY CD4 TCELL YOUNG UP MsiDb C7
 GSE3882 MEMORY CD4 TCELL VS TH1 UP MsiDb C7
 GSE18983 TCONV VS TREG 2H TNF STIM DN MsiDb C7
 GSE36476 CTRL VS TSST ACT 40H MEMORY CD4 TCELL OLD UP MsiDb C7
 GSE12845 IGD POS BLOOD VS DARKZONE GC TONSIL_BCELL_UP_MsiDb_C7
 GSE22886 NAIVE CD4 TCELL VS 12H ACT TH1 UP MsiDb C7
 GSE22886 NAIVE CD4 TCELL VS 48H ACT TH1 UP MsiDb C7
 GSE36476 CTRL VS TSST ACT 40H MEMORY CD4 TCELL YOUNG UP MsiDb C7
 GSE22886 NAIVE CD4 TCELL VS 12H ACT TH2 UP MsiDb C7
 GSE32886 LNSTIM VS GMC5F AND CURDLAN HIGHDOSE STIM DC DN MsiDb C7
 GSE3882 MEMORY CD4 TCELL VS TH2 UP MsiDb C7
 nuclear chromatin (GoID:GO:0000750), evidenceTypes:HD|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 DN-binding transcription factor activity, RNA polymerase II-specific (GoID:GO:0000161), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_MP
 Zinc-finger, UniProt-Keyword
 CUI_TCF21_TARGETS_2_DN MsiDb C2
 GSE12966 GC VS NAIVE BCELL DN MsiDb C7
 ChicheiPMID:2464022-2014_M5.5_PAPER
 GSE32986 GMC5F VS GMC5F AND CURDLAN LOWDOSE STIM DC DN MsiDb C7
 ENAY INTERFERON SIGNATURE IN CANCER MsiDb C2
 GSE20727 DNFB ALLERGEN VS ROS_INH_AND DNFB ALLERGEN_TREATED_DC_UP_MsiDb_C7
 M088 interferon_HBL1 (PMID:2179087), SignatureDB
 GSE40666 UNTREATED VS IFNA_STIM_STAT4_KO_EFFECTOR_CD8_TCELL_90MIN_DN MsiDb C7
 HORRUCH_WTAP_TARGETS_UP MsiDb C2
 BCL6 ChIPSeq_Basso_GC_low (PMID:1985633), SignatureDB
 GSE29618 BCELL VS MDC UP MsiDb C7
 GSE29618 BCELL VS MDC UP MsiDb C7
 GSE29618 BCELL VS PDC UP MsiDb C7
 Human Breast_Mackay07_1385GenesUpregulated (1755561-Table2), GeneSisDB
 GSE10325 LUPUS CD4 TCELL VS LUPUS BCELL DN MsiDb C7
 GSE29618 BCELL VS MDC DAY7 FLU VACCINE UP MsiDb C7
 GSE3982 MEMORY CD4 TCELL VS BCELL DN MsiDb C7
 HELLER_HDAC_TARGETS_SILENCED_BY METHYLATION DN MsiDb C2
 Plasma_cell_Nwman (PMID:25822800), SignatureDB
 REACTOME_AMYLOIDS_MsiDb_C2
 GSE19888 ADENO3INE_A3R_INH_PRETREAT_AND_ACT_BY_A3R_VS_A3R_INH_AND TCELL_MEMBRANES_ACT_MAST_CELL_UP_MsiDb_C7
 GSE19888 CTRL VS A3R_INHIBITOR_TREATED_MAST_CELL_DN MsiDb C7
 ChicheiPMID:2464022-2014_M6.3_PAPER
 ACEVEDO NORMAL TISSUE ADJACENT TO LIVER_TUMOR_UP MsiDb C2
 ChicheiPMID:2464022-2014_M5.2_PAPER
 GABRIELY MIR21_TARGETS MsiDb C2
 REACTOME_TRANSLATION MsiDb C2
 ChicheiPMID:2464022-2014_M4.5_PAPER
 REACTOME_3_UTR_MEDIATED_TRANSLATIONAL_REGULATION MsiDb C2
 REACTOME_NONSENSE_MEDIATED_TRANSLATION_ENHANCED_BY_THE_EXON_JUNCTION_COMPLEX MsiDb C2
 REACTOME_GMCSF AND GMCSF AND CURDLAN HIGHDOSE STIM DC DN MsiDb C7
 REACTOME_PEPTIDE_CHAIN_ELONGATION MsiDb C2
 REACTOME_INFLUENZA_VIRAL_RNA_TRANSCRIPTION_AND_REPLICATION MsiDb C2
 REACTOME_SRP_DEPENDANT_COTRANSLATIONAL_PROTEIN_TARGETING_TO_MEMBRANE MsiDb C2
 REACTOME_INFLUENZA_LIFE_CYCLE MsiDb C2
 Human Leukemia_Calh08_1020genes (18362358-Table7), GeneSisDB
 Human ProteinKinases_Freve03_425genes (12509443-Table2), GeneSisDB
 chr6p2_MsiDb_C1
 FLORIO_NEOCORTEX_BASAL_RADIAL_GLIA_UP MsiDb C7
 ChicheiPMID:2464022-2014_M2.1_PAPER
 LiPMID:24336226-2013-MsiSivVaccines_TBA (M246) PAPER
 ChicheiPMID:2464022-2014_M4.8_PAPER
 neuropeptide signaling pathway (GoID:GO:0007218), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 GSE45365 BCELL VS CD8 TCELL UP MsiDb C7
 Human StemCell_Ehrst007_238Genes (1701861-Table1), GeneSisDB
 chr19p12_MsiDb_C1
 GSE45365 WT VS IFNAR_KO BCELL MCMV INFECTION UP MsiDb C7
 FLORIO_HUMAN_NEOCORTEX MsiDb C2
 chr5q13_MsiDb_C1
 LU_EZH2_TARGETS_DN MsiDb C2
 ChicheiPMID:2464022-2014_M2.2_PAPER
 GSE29614 CTRL VS DAY7 TIV FLU VACCINE PBMC DN MsiDb C7
 GSE29614 DAY3 VS DAY7 TIV FLU VACCINE PBMC DN MsiDb C7
 GSE29617 CTRL VS DAY7 TIV FLU VACCINE PBMC_2008_DN MsiDb C7
 MORI_PLASMA_CELL_UP MsiDb C2
 GSE22886 IGM MEMORY BCELL VS BM PLASMA CELL DN MsiDb C7
 IRFA_ABC_induced_PC (PMID:2268399), SignatureDB
 GSE40225 WT VS RFP_7X_DIABETIC_MOUSE_PANCREATIC_CD8_TCELL_DN MsiDb C7
 GSE22886 NAIVE BCELL VS BLOOD_PLASMA_CELL_DN MsiDb C7
 GSE29164 CD8 TCELL VS CD8 TCELL_AND_IL12_TREATED_MELANOMA_DAY7_DN MsiDb C7
 Human Lymphoma_Chin09_174genes (18974375-TableS2), GeneSisDB
 XBP1_target_all (PMID:15345222), SignatureDB
 MILI_PSEUDOPODIA_HAPTOTAXIS_DN MsiDb C2
 GSE12966 PLASMA CELL VS NAIVE BCELL UP MsiDb C7
 GSE22886 NAIVE BCELL VS BM PLASMA CELL DN MsiDb C7
 Endoplasmic reticulum, UniProt-Keyword
 endoplasmic reticulum membrane (GoID:GO:0005789), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 nuclear outer membrane-endoplasmic reticulum membrane network (GoID:GO:0042175), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 endoplasmic reticulum nest (GoID:GO:0005785), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 GSE40273 EOS_KO VS WT_TREG_UP MsiDb C7
 TARTE_PLASMA_CELL_VS_B_LYMPHOCYTE_UP MsiDb C2
 endoplasmic reticulum (GoID:GO:0005789), evidenceTypes:HD|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 PASQUALLICCI LYMPHOMA_BY_GC_STAGE_UP MsiDb C2
 Plasma_cell_at_B_cell (PMID:17252022), SignatureDB
 Golgi apparatus (GoID:GO:0005794), evidenceTypes:HD|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 Golgi apparatus, UniProt-Keyword
 Signal, UniProt-Keyword
 BASSO_CD40_SIGNALING_UP MsiDb C2
 IRFA_ABC_induced_NFB (PMID:2268399), SignatureDB
 GSE42724 MEMORY VS B1 BCELL DN MsiDb C7
 Demethylated cell activated Neutrophil (PMID:23522800), SignatureDB
 GSE9316 IL6 KO VS IFNG KO INVIVO EXPANDED CD4 TCELL DN MsiDb C7
 GSE36626 WT VS IL1R_KO_SKIN_STAPH_AUREUS_INF_DN MsiDb C7
 GSE21670 STAT3_KO VS WT_CD4_TCELL_UP MsiDb C7
 GSE41176 UNSTIM VS ANTI_IGM_STIM_BCELL_1H_UP MsiDb C7
 GSE22886 DAY0 VS DAY1 MONOCYTE IN CULTURE DN MsiDb C7
 RUTELLA_RESPONSE_TO_CSF28B_AND_IL4_UP MsiDb C2
 GSE36888 UNTREATED VS IL2 TREATED TCELL_17H_DN MsiDb C7
 LiPMID:24336226-2013-MsiSivVaccines_entched_in_NK_cells_III (M7.2)_PAPER
 inflammatory response (GoID:GO:0006954), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 RUTELLA_RESPONSE_TO_HGF_UP MsiDb C2
 LU_INDUCED_T_TO_NATURAL_KILLER_UP MsiDb C2
 Human Lymphoma_Chin09_209genes (18974375-TableS2), GeneSisDB
 Human Lymphoma_Chin09_1201genes (19377508-SuppTable1), GeneSisDB
 BLUM_RESPONSE_TO_SALIRASIB_UP MsiDb C2
 GARY_CD8_TARGETS_UP MsiDb C2
 GSE2770 UNTREATED VS IL12 TREATED ACT_CD4_TCELL_6H_UP MsiDb C7
 Human Leukemia_Kriep08_29genes (18701491-Table2), GeneSisDB
 KRIGE_AMINO_ACID_DEPRIVATION MsiDb C2
 HELLER_SILENCED_BY METHYLATION DN MsiDb C2
 Leucine_starve_up (PMID:12101249), SignatureDB
 PENG_LEUCINE_DEPRIVATION_UP MsiDb C2
 ZHAN_MULTIPLE_MYELOMA_CD1_UP MsiDb C2
 Myeloma_CD1-subgroup_up (PMID:18728703), SignatureDB
 cellular amino acid metabolic process (GoID:GO:0006520), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 MTOR_UP_N4_V1_UP MsiDb C6
 carboxylic acid metabolic process (GoID:GO:0019752), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 organic acid metabolic process (GoID:GO:0006082), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 oxoacid metabolic process (GoID:GO:0043436), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 GSE369 PRE VS POST_IL6_INJECTION_SOCS3_KO_LIVER_DN MsiDb C7
 GINESTIER_BREAST_CANCER_ZNF217_AMPLIFIED_DN MsiDb C2
 ChicheiPMID:2464022-2014_M4.16_PAPER
 PR2_C_EED_UP_V1_DN MsiDb C6
 ENK_UV_RESPONSE_KERATINOCYTE_UP MsiDb C2
 GSE17301 CTRL VS 48H ACD3 ACD28 IFNA2_STIM_CD8_TCELL_DN MsiDb C7
 GSE17301 ACD3_ACD28 VS ACD3_ACD28_AND_IFNA5_STIM_CD8_TCELL_UP MsiDb C7
 LiPMID:24336226-2013-MsiSivVaccines_immune_activation_III (M3.1)_PAPER
 MORF_PHB MsiDb C4
 GSE35543 IN_VIVO_ITREG_VS_CONVERTED_EX_ITREG_UP MsiDb C7
 Human Breast_Naacarai10_1345genes (20081105-ST-1), GeneSisDB
 Human Colon_Grad007_1102genes (17210682-SuppTable3), GeneSisDB
 Human Colon_Grad007_1950genes (17210682-SuppTable2), GeneSisDB
 JAK2_upregulated_PMBL (PMID:21156283), SignatureDB
 Mouse StemCell_Chamb07_1521genes (17676974-TableS2), GeneSisDB
 ChicheiPMID:2464022-2014_M5.6_PAPER
 MILI_PSEUDOPODIA_HAPTOTAXIS_UP MsiDb C2
 DUTERTER ESTRADIOL_RESPONSE_24HR_UP MsiDb C2
 cell cycle process (GoID:GO:0022402), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 chromosome organization (GoID:GO:0051276), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 GNF2_PA2G4 MsiDb C4
 Human StemCell_Kriep08_86genes (18657080-TableS2), GeneSisDB
 Mouse Lymphoma_Wu08_1015genes (1835562-TableS2b), GeneSisDB
 TARTE_PLASMA_CELL_VS_PLASMABLAST_DN MsiDb C2
 FISCHER_DREAM_TARGETS MsiDb C2
 GOBERT_OLIGODENDROCYTE_DIFFERENTIATION_UP MsiDb C2
 Human Breast_Troester06_364genes_up_DOX-MCF7 (171501101-TableS1h), GeneSisDB
 DOOD_NASOPHARYNGEAL_CARCINOMA_DN MsiDb C2
 KINSEY_TARGETS_OF_EVSR1_FLII_FUSION_UP MsiDb C2
 Rat hippocampus_Monari10_1831genes (2097356-TableS2), GeneSisDB
 PUJANA_CHER2_FCC_NETWORK MsiDb C2
 SHEDDEN_LUNG_CANCER_POOR_SURVIVAL_A6 MsiDb C2
 LEE_BMP2_TARGETS_DN MsiDb C2
 ZHANG_TLX_TARGETS_BOHR_DN MsiDb C2
 WEI_MYCN_TARGETS_WITH_E_BOX MsiDb C2
 JOHNSTONE_PARVUS_TARGETS_13_DN MsiDb C2
 RODRIGUES_THYROID_CARCINOMA_ANAPLASTIC_UP MsiDb C2
 RODRIGUES_THYROID_CARCINOMA_POORLY_DIFFERENTIATED_UP MsiDb C2
 PLASMA_BCR42_FCC_NETWORK MsiDb C2
 ZHANG_BREAST_CANCER_PROGNETORS_UP MsiDb C2
 PENG_RAPAMYCIN_RESPONSE_DN MsiDb C2
 mitochondrial protein complex (GoID:GO:0098798), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 KRIGE_RESPONSE_TO_TOSEDOSTAT_6HR_DN MsiDb C2
 KRIGE_RESPONSE_TO_TOSEDOSTAT_24HR_DN MsiDb C2
 Transist peptide, UniProt-Keyword
 Mitochondrion, UniProt-Keyword
 mitochondrial part (GoID:GO:0044429), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 mitochondrion (GoID:GO:0005739), evidenceTypes:HD|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 mitochondrial inner membrane (GoID:GO:0005743), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 mitochondrial membrane (GoID:GO:0031966), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 mitochondrial envelope (GoID:GO:0005740), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 orotate inner membrane (GoID:GO:0019856), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 RNA processing (GoID:GO:0006398), evidenceTypes:EX|PI|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 ribonucleoprotein complex (GoID:GO:1989094), evidenceTypes:HD|BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_CC
 Human Breast_Hu06_1400genes (16643655-1900GenesList), GeneSisDB
 Metallothionein_Nosid05 (PMID:15075390), SignatureDB
 Cadmium, UniProt-Keyword
 Metal-thiolate cluster, UniProt-Keyword
 stress response to metal ion (GoID:GO:0097501), evidenceTypes:IBA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 cellular response to zinc ion (GoID:GO:0071294), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 chr16q13_MsiDb_C1
 cellular response to inorganic substance (GoID:GO:0071241), evidenceTypes:IBA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 detoxification of copper ion (GoID:GO:0010273), evidenceTypes:IBA|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 cellular response to cadmium ion (GoID:GO:0071276), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 cellular response to copper ion (GoID:GO:0071280), evidenceTypes:BA|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 stress response to copper ion (GoID:GO:1901618), evidenceTypes:IBA|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 detoxification of inorganic compound (GoID:GO:0061687), evidenceTypes:IBA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP
 nuclear division (GoID:GO:0002802), evidenceTypes:BA|IC|DA|EA|I|G|I|MP|I|SS|NAS|ITAS|, GeneOntology_BP