```
KEGG_SPLICEOSOME, KEGG_SPLICEOSOME
REACTOME_INFLUENZA_INFECTION, REACTOME_INFLUENZA_INFECTION
WP_MRNA_PROCESSING, WP_MRNA_PROCESSING
REACTOME_NUCLEOTIDE_EXCISION_REPAIR, REACTOME_NUCLEOTIDE_EXCISION_REPAIR
REACTOME_TRANSPORT_OF_MATURE_TRANSCRIPT_TO_CYTOPLASM, REACTOME_TRANSPORT_OF_MATURE_TRANSCRIPT_TO_CYTOPLASM
REACTOME_HIV_LIFE_CYCLE, REACTOME_HIV_LIFE_CYCLE
REACTOME_CHROMOSOME_MAINTENANCE, REACTOME_CHROMOSOME_MAINTENANCE
REACTOME_MRNA_SPLICING_MINOR_PATHWAY, REACTOME_MRNA_SPLICING_MINOR_PATHWAY
REACTOME_TRANSCRIPTION_COUPLED_NUCLEOTIDE_EXCISION_REPAIR_TC_NER, REACTOME_TRANSCRIPTION_COUPLED_NUCLEOTIDE_EXCISION_REPAIR_TC_NER
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_13, YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_13
MISSIAGLIA_REGULATED_BY_METHYLATION_DN, MISSIAGLIA_REGULATED_BY_METHYLATION_DN
REACTOME_SNRNP_ASSEMBLY, REACTOME_SNRNP_ASSEMBLY
REACTOME_RNA_POLYMERASE_II_TRANSCRIPTION_TERMINATION, REACTOME_RNA_POLYMERASE_II_TRANSCRIPTION_TERMINATION
KEGG_HUNTINGTONS_DISEASE, KEGG_HUNTINGTONS_DISEASE
REACTOME_TELOMERE_MAINTENANCE, REACTOME_TELOMERE_MAINTENANCE
DANG_REGULATED_BY_MYC_UP, DANG_REGULATED_BY_MYC_UP
REACTOME_TRANSCRIPTION_OF_THE_HIV_GENOME, REACTOME_TRANSCRIPTION_OF_THE_HIV_GENOME
REACTOME_TRANSCRIPTIONAL_REGULATION_BY_SMALL_RNAS, REACTOME_TRANSCRIPTIONAL_REGULATION_BY_SMALL_RNAS
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_DNA_REPAIR_GENES, REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_DNA_REPAIR_GENES
 ISON_SICKLE_CELL_DISEASE_DN, JISON_SICKLE_CELL_DISEASE_DN
REACTOME_RNA_POLYMERASE_II_TRANSCRIBES_SNRNA_GENES, REACTOME_RNA_POLYMERASE_II_TRANSCRIBES_SNRNA_GENES
REACTOME DUAL INCISION IN TC NER, REACTOME DUAL INCISION IN TC NER
MALONEY_RESPONSE_TO_17AAG_DN, MALONEY_RESPONSE_TO_17AAG_DN
REACTOME_FORMATION_OF_RNA_POL_II_ELONGATION_COMPLEX, REACTOME_FORMATION_OF_RNA_POL_II_ELONGATION_COMPLEX
REACTOME_VIRAL_MESSENGER_RNA_SYNTHESIS, REACTOME_VIRAL_MESSENGER_RNA_SYNTHESIS
ZHANG_RESPONSE_TO_CANTHARIDIN_DN, ZHANG_RESPONSE_TO_CANTHARIDIN_DN
FLECHNER_PBL_KIDNEY_TRANSPLANT_OK_VS_DONOR_UP, FLECHNER_PBL_KIDNEY_TRANSPLANT_OK_VS_DONOR_UP
REACTOME_HIV_TRANSCRIPTION_ELONGATION, REACTOME_HIV_TRANSCRIPTION_ELONGATION
ABRAMSON_INTERACT_WITH_AIRE, ABRAMSON_INTERACT_WITH_AIRE
REACTOME_TRANSPORT_OF_MATURE_MRNAS_DERIVED_FROM_INTRONLESS_TRANSCRIPTS, REACTOME_TRANSPORT_OF_MATURE_MRNAS_DERIVED_FROM_INTRONLESS_TRANSCRIPTS
ZHONG_RESPONSE_TO_AZACITIDINE_AND_TSA_DN, ZHONG_RESPONSE_TO_AZACITIDINE_AND_TSA_DN
REACTOME_FORMATION_OF_TC_NER_PRE_INCISION_COMPLEX, REACTOME_FORMATION_OF_TC_NER_PRE_INCISION_COMPLEX
OUELLET_OVARIAN_CANCER_INVASIVE_VS_LMP_UP, OUELLET_OVARIAN_CANCER_INVASIVE_VS_LMP_UP
REACTOME_FORMATION_OF_THE_EARLY_ELONGATION_COMPLEX, REACTOME_FORMATION_OF_THE_EARLY_ELONGATION_COMPLEX
RHODES_CANCER_META_SIGNATURE, RHODES_CANCER_META_SIGNATURE
WP_PYRIMIDINE_METABOLISM, WP_PYRIMIDINE_METABOLISM
SAKAI_TUMOR_INFILTRATING_MONOCYTES_DN, SAKAI_TUMOR_INFILTRATING_MONOCYTES_DN
REACTOME_GENE_SILENCING_BY_RNA, REACTOME_GENE_SILENCING_BY_RNA
REACTOME_DEADENYLATION_DEPENDENT_MRNA_DECAY, REACTOME_DEADENYLATION_DEPENDENT_MRNA_DECAY
REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION, REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION
KEGG_RNA_DEGRADATION, KEGG_RNA_DEGRADATION
REACTOME_HIV_ELONGATION_ARREST_AND_RECOVERY, REACTOME_HIV_ELONGATION_ARREST_AND_RECOVERY
KEGG_RNA_POLYMERASE, KEGG_RNA_POLYMERASE
WP_EUKARYOTIC_TRANSCRIPTION_INITIATION, WP_EUKARYOTIC_TRANSCRIPTION_INITIATION
REACTOME_MRNA_CAPPING, REACTOME_MRNA_CAPPING
REACTOME_ABORTIVE_ELONGATION_OF_HIV_1_TRANSCRIPT_IN_THE_ABSENCE_OF_TAT, REACTOME_ABORTIVE_ELONGATION_OF_HIV_1_TRANSCRIPT_IN_THE_ABSENCE_OF_TAT
REACTOME_HIV_TRANSCRIPTION_INITIATION, REACTOME_HIV_TRANSCRIPTION_INITIATION
KEGG_PYRIMIDINE_METABOLISM, KEGG_PYRIMIDINE_METABOLISM
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_10, YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_10
REACTOME_INHIBITION_OF_DNA_RECOMBINATION_AT_TELOMERE, REACTOME_INHIBITION_OF_DNA_RECOMBINATION_AT_TELOMERE
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_INITIATION, REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_INITIATION
REACTOME_POSITIVE_EPIGENETIC_REGULATION_OF_RRNA_EXPRESSION, REACTOME_POSITIVE_EPIGENETIC_REGULATION_OF_RRNA_EXPRESSION
SAKAI_CHRONIC_HEPATITIS_VS_LIVER_CANCER_UP, SAKAI_CHRONIC_HEPATITIS_VS_LIVER_CANCER_UP
SMITH_TERT_TARGETS_UP, SMITH_TERT_TARGETS_UP
REACTOME_FGFR2_ALTERNATIVE_SPLICING, REACTOME_FGFR2_ALTERNATIVE_SPLICING
REACTOME RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 1 PROMOTER, REACTOME RNA POLYMERASE III TRANSCRIPTION INITIATION FROM TYPE 1 PROMOTER
REACTOME_PROCESSING_OF_CAPPED_INTRONLESS_PRE_MRNA, REACTOME_PROCESSING_OF_CAPPED_INTRONLESS_PRE_MRNA
KEGG_PURINE_METABOLISM, KEGG_PURINE_METABOLISM
REACTOME_B_WICH_COMPLEX_POSITIVELY_REGULATES_RRNA_EXPRESSION, REACTOME_B_WICH_COMPLEX_POSITIVELY_REGULATES_RRNA_EXPRESSION
REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION_TERMINATION, REACTOME_RNA_POLYMERASE_III_TRANSCRIPTION_TERMINATION
MODY_HIPPOCAMPUS_PRENATAL, MODY_HIPPOCAMPUS_PRENATAL
REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_TERMINATION, REACTOME_RNA_POLYMERASE_I_TRANSCRIPTION_TERMINATION
HOLLEMAN_PREDNISOLONE_RESISTANCE_B_ALL_UP, HOLLEMAN_PREDNISOLONE_RESISTANCE_B_ALL_UP
HAHTOLA_MYCOSIS_FUNGOIDES_SKIN_UP, HAHTOLA_MYCOSIS_FUNGOIDES_SKIN_UP
BIOCARTA_SM_PATHWAY, BIOCARTA_SM_PATHWAY
CHICAS_RB1_TARGETS_LOW_SERUM, CHICAS_RB1_TARGETS_LOW_SERUM
SESTO_RESPONSE_TO_UV_C0, SESTO_RESPONSE_TO_UV_C0
REACTOME_ESTROGEN_DEPENDENT_GENE_EXPRESSION, REACTOME_ESTROGEN_DEPENDENT_GENE_EXPRESSION
LEE_METASTASIS_AND_RNA_PROCESSING_UP, LEE_METASTASIS_AND_RNA_PROCESSING_UP
STEARMAN_LUNG_CANCER_EARLY_VS_LATE_UP, STEARMAN_LUNG_CANCER_EARLY_VS_LATE_UP
HOLLEMAN_VINCRISTINE_RESISTANCE_ALL_DN, HOLLEMAN_VINCRISTINE_RESISTANCE_ALL_DN
```

## MRNA\_SPLICING, REACTOME\_MRNA\_SPLICING

REACTOME\_SIGNALING\_BY\_FGFR2\_IIIA\_TM, REACTOME\_SIGNALING\_BY\_FGFR2\_IIIA\_TM

YAO\_TEMPORAL\_RESPONSE\_TO\_PROGESTERONE\_CLUSTER\_7, YAO\_TEMPORAL\_RESPONSE\_TO\_PROGESTERONE\_CLUSTER\_7

HOLLEMAN\_PREDNISOLONE\_RESISTANCE\_ALL\_UP, HOLLEMAN\_PREDNISOLONE\_RESISTANCE\_ALL\_UP

REACTOME\_RNA\_POLYMERASE\_III\_TRANSCRIPTION\_INITIATION\_FROM\_TYPE\_3\_PROMOTER, REACTOME\_RNA\_POLYMERASE\_III\_TRANSCRIPTION\_INITIATION\_FROM\_TYPE\_3\_PROMOTER SCHAEFFER\_PROSTATE\_DEVELOPMENT\_AND\_CANCER\_BOX4\_DN, SCHAEFFER\_PROSTATE\_DEVELOPMENT\_AND\_CANCER\_BOX4\_DN

RICKMAN\_TUMOR\_DIFFERENTIATED\_MODERATELY\_VS\_POORLY\_DN, RICKMAN\_TUMOR\_DIFFERENTIATED\_MODERATELY\_VS\_POORLY\_DN

GAZDA\_DIAMOND\_BLACKFAN\_ANEMIA\_MYELOID\_DN, GAZDA\_DIAMOND\_BLACKFAN\_ANEMIA\_MYELOID\_DN PURBEY\_TARGETS\_OF\_CTBP1\_AND\_SATB1\_DN, PURBEY\_TARGETS\_OF\_CTBP1\_AND\_SATB1\_DN

WOOD\_EBV\_EBNA1\_TARGETS\_UP, WOOD\_EBV\_EBNA1\_TARGETS\_UP

MATTIOLI\_MGUS\_VS\_PCL, MATTIOLI\_MGUS\_VS\_PCL

ASTON\_MAJOR\_DEPRESSIVE\_DISORDER\_DN, ASTON\_MAJOR\_DEPRESSIVE\_DISORDER\_DN

REACTOME\_PROCESSING\_OF\_INTRONLESS\_PRE\_MRNAS, REACTOME\_PROCESSING\_OF\_INTRONLESS\_PRE\_MRNAS

DAIRKEE\_CANCER\_PRONE\_RESPONSE\_BPA, DAIRKEE\_CANCER\_PRONE\_RESPONSE\_BPA BACOLOD\_RESISTANCE\_TO\_ALKYLATING\_AGENTS\_DN, BACOLOD\_RESISTANCE\_TO\_ALKYLATING\_AGENTS\_DN

REACTOME\_MICRORNA\_MIRNA\_BIOGENESIS, REACTOME\_MICRORNA\_MIRNA\_BIOGENESIS

REACTOME\_SLBP\_DEPENDENT\_PROCESSING\_OF\_REPLICATION\_DEPENDENT\_HISTONE\_PRE\_MRNAS, REACTOME\_SLBP\_DEPENDENT\_PROCESSING\_OF\_REPLICATION\_DEPENDENT\_HISTONE\_PRE\_MRNAS HOLLEMAN\_ASPARAGINASE\_RESISTANCE\_ALL\_DN, HOLLEMAN\_ASPARAGINASE\_RESISTANCE\_ALL\_DN

PRAMOONJAGO\_SOX4\_TARGETS\_DN, PRAMOONJAGO\_SOX4\_TARGETS\_DN

ONDER\_CDH1\_TARGETS\_1\_DN, ONDER\_CDH1\_TARGETS\_1\_DN

BOYAULT\_LIVER\_CANCER\_SUBCLASS\_G123\_UP, BOYAULT\_LIVER\_CANCER\_SUBCLASS\_G123\_UP

REACTOME\_RNA\_POLYMERASE\_III\_CHAIN\_ELONGATION, REACTOME\_RNA\_POLYMERASE\_III\_CHAIN\_ELONGATION

FLECHNER\_PBL\_KIDNEY\_TRANSPLANT\_REJECTED\_VS\_OK\_DN, FLECHNER\_PBL\_KIDNEY\_TRANSPLANT\_REJECTED\_VS\_OK\_DN MAYBURD RESPONSE TO L663536 DN, MAYBURD RESPONSE TO L663536 DN

JAZAG\_TGFB1\_SIGNALING\_UP, JAZAG\_TGFB1\_SIGNALING\_UP

REACTOME\_PIWI\_INTERACTING\_RNA\_PIRNA\_BIOGENESIS, REACTOME\_PIWI\_INTERACTING\_RNA\_PIRNA\_BIOGENESIS

REACTOME\_ACTIVATION\_OF\_ANTERIOR\_HOX\_GENES\_IN\_HINDBRAIN\_DEVELOPMENT\_DURING\_EARLY\_EMBRYOGENESIS, REACTOME\_ACTIVATION\_OF\_ANTERIOR\_HOX\_GENES\_IN\_HINDBRAIN\_DEVELOPMENT\_DURING\_ RAHMAN\_TP53\_TARGETS\_PHOSPHORYLATED, RAHMAN\_TP53\_TARGETS\_PHOSPHORYLATED

CHAUHAN\_RESPONSE\_TO\_METHOXYESTRADIOL\_UP, CHAUHAN\_RESPONSE\_TO\_METHOXYESTRADIOL\_UP

SHEDDEN\_LUNG\_CANCER\_GOOD\_SURVIVAL\_A5, SHEDDEN\_LUNG\_CANCER\_GOOD\_SURVIVAL\_A5

KIM\_WT1\_TARGETS\_8HR\_DN, KIM\_WT1\_TARGETS\_8HR\_DN

REACTOME\_RHOBTB2\_GTPASE\_CYCLE, REACTOME\_RHOBTB2\_GTPASE\_CYCLE HU\_ANGIOGENESIS\_DN, HU\_ANGIOGENESIS\_DN

BOUDOUKHA\_BOUND\_BY\_IGF2BP2, BOUDOUKHA\_BOUND\_BY\_IGF2BP2

HOLLEMAN\_VINCRISTINE\_RESISTANCE\_B\_ALL\_DN, HOLLEMAN\_VINCRISTINE\_RESISTANCE\_B\_ALL\_DN RICKMAN\_TUMOR\_DIFFERENTIATED\_MODERATELY\_VS\_POORLY\_UP, RICKMAN\_TUMOR\_DIFFERENTIATED\_MODERATELY\_VS\_POORLY\_UP

KYNG\_WERNER\_SYNDROM\_AND\_NORMAL\_AGING\_DN, KYNG\_WERNER\_SYNDROM\_AND\_NORMAL\_AGING\_DN

SESTO\_RESPONSE\_TO\_UV\_C2, SESTO\_RESPONSE\_TO\_UV\_C2

MELLMAN\_TUT1\_TARGETS\_UP, MELLMAN\_TUT1\_TARGETS\_UP

FAELT\_B\_CLL\_WITH\_VH\_REARRANGEMENTS\_UP, FAELT\_B\_CLL\_WITH\_VH\_REARRANGEMENTS\_UP

TOMIDA METASTASIS UP, TOMIDA METASTASIS UP LOPEZ\_TRANSLATION\_VIA\_FN1\_SIGNALING, LOPEZ\_TRANSLATION\_VIA\_FN1\_SIGNALING

BURTON\_ADIPOGENESIS\_PEAK\_AT\_24HR, BURTON\_ADIPOGENESIS\_PEAK\_AT\_24HR

GAZDA\_DIAMOND\_BLACKFAN\_ANEMIA\_ERYTHROID\_UP, GAZDA\_DIAMOND\_BLACKFAN\_ANEMIA\_ERYTHROID\_UP

GROSS HYPOXIA VIA ELK3 AND HIF1A DN, GROSS HYPOXIA VIA ELK3 AND HIF1A DN

REACTOME\_RHOBTB\_GTPASE\_CYCLE, REACTOME\_RHOBTB\_GTPASE\_CYCLE