REACTOME_DNA_REPLICATION, REACTOME_DNA_REPLICATION REACTOME_MITOTIC_G1_PHASE_AND_G1_S_TRANSITION, REACTOME_MITOTIC_G1_PHASE_AND_G1_S_TRANSITION REACTOME_MITOTIC_G2_G2_M_PHASES, REACTOME_MITOTIC_G2_G2_M_PHASES REACTOME_REGULATION_OF_TP53_ACTIVITY, REACTOME_REGULATION_OF_TP53_ACTIVITY REACTOME_PTEN_REGULATION, REACTOME_PTEN_REGULATION REACTOME_GLOBAL_GENOME_NUCLEOTIDE_EXCISION_REPAIR_GG_NER, REACTOME_GLOBAL_GENOME_NUCLEOTIDE_EXCISION_REPAIR_GG_NER REACTOME G2 M CHECKPOINTS, REACTOME G2 M CHECKPOINTS REACTOME_SWITCHING_OF_ORIGINS_TO_A_POST_REPLICATIVE_STATE, REACTOME_SWITCHING_OF_ORIGINS_TO_A_POST_REPLICATIVE_STATE REACTOME_REGULATION_OF_MRNA_STABILITY_BY_PROTEINS_THAT_BIND_AU_RICH_ELEMENTS, REACTOME_REGULATION_OF_MRNA_STABILITY_BY_PROTEINS_THAT_BIND_AU_RICH_ELEMENTS REACTOME_UCH_PROTEINASES, REACTOME_UCH_PROTEINASES REACTOME_TRANSCRIPTIONAL_REGULATION_OF_GRANULOPOIESIS, REACTOME_TRANSCRIPTIONAL_REGULATION_OF_GRANULOPOIESIS REACTOME RUNX1 REGULATES TRANSCRIPTION OF GENES INVOLVED IN DIFFERENTIATION OF HSCS, REACTOME RUNX1 REGULATES TRANSCRIPTION OF GENES INVOLVED IN DIFFERENTIATION OF HSCS REACTOME APC C MEDIATED DEGRADATION OF CELL CYCLE PROTEINS, REACTOME APC C MEDIATED DEGRADATION OF CELL CYCLE PROTEINS REACTOME_APOPTOSIS, REACTOME_APOPTOSIS REACTOME_DNA_REPLICATION_PRE_INITIATION, REACTOME_DNA_REPLICATION_PRE_INITIATION REACTOME_HDR_THROUGH_HOMOLOGOUS_RECOMBINATION_HRR, REACTOME_HDR_THROUGH_HOMOLOGOUS_RECOMBINATION_HRR REACTOME_APC_C_CDH1_MEDIATED_DEGRADATION_OF_CDC20_AND_OTHER_APC_C_CDH1_TARGETED_PROTEINS_IN_LATE_MITOSIS_EARLY_G1

REACTOME_APC_C_CDH1_MEDIATED_DEGRADATION_OF_CDC20_AND_OTHER_APC_C_CDH1_TARGETED_PROTEINS_IN_LATE_MITOSIS_EARLY_G1 REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_PHOSPHORYLATION, REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_PHOSPHORYLATION REACTOME_DNA_DAMAGE_RECOGNITION_IN_GG_NER, REACTOME_DNA_DAMAGE_RECOGNITION_IN_GG_NER REACTOME_CYCLIN_A_CDK2_ASSOCIATED_EVENTS_AT_S_PHASE_ENTRY, REACTOME_CYCLIN_A_CDK2_ASSOCIATED_EVENTS_AT_S_PHASE_ENTRY REACTOME_DNA_DOUBLE_STRAND_BREAK_REPAIR, REACTOME_DNA_DOUBLE_STRAND_BREAK_REPAIR REACTOME_CELLULAR_SENESCENCE, REACTOME_CELLULAR_SENESCENCE REACTOME_REGULATION_OF_PTEN_STABILITY_AND_ACTIVITY, REACTOME_REGULATION_OF_PTEN_STABILITY_AND_ACTIVITY REACTOME_DNA_DAMAGE_TELOMERE_STRESS_INDUCED_SENESCENCE, REACTOME_DNA_DAMAGE_TELOMERE_STRESS_INDUCED_SENESCENCE REACTOME_DEGRADATION_OF_BETA_CATENIN_BY_THE_DESTRUCTION_COMPLEX, REACTOME_DEGRADATION_OF_BETA_CATENIN_BY_THE_DESTRUCTION_COMPLEX REACTOME_RESOLUTION_OF_ABASIC_SITES_AP_SITES, REACTOME_RESOLUTION_OF_ABASIC_SITES_AP_SITES REACTOME_FANCONI_ANEMIA_PATHWAY, REACTOME_FANCONI_ANEMIA_PATHWAY REACTOME_HOMOLOGY_DIRECTED_REPAIR, REACTOME_HOMOLOGY_DIRECTED_REPAIR REACTOME_REGULATION_OF_HMOX1_EXPRESSION_AND_ACTIVITY, REACTOME_REGULATION_OF_HMOX1_EXPRESSION_AND_ACTIVITY REACTOME_ASSEMBLY_OF_THE_PRE_REPLICATIVE_COMPLEX, REACTOME_ASSEMBLY_OF_THE_PRE_REPLICATIVE_COMPLEX REACTOME_SENESCENCE_ASSOCIATED_SECRETORY_PHENOTYPE_SASP, REACTOME_SENESCENCE_ASSOCIATED_SECRETORY_PHENOTYPE_SASP REACTOME ORC1_REMOVAL_FROM_CHROMATIN, REACTOME_ORC1_REMOVAL_FROM_CHROMATIN REACTOME_DNA_DAMAGE_BYPASS, REACTOME_DNA_DAMAGE_BYPASS REACTOME_HOMOLOGOUS_DNA_PAIRING_AND_STRAND_EXCHANGE, REACTOME_HOMOLOGOUS_DNA_PAIRING_AND_STRAND_EXCHANGE REACTOME_SCF_SKP2_MEDIATED_DEGRADATION_OF_P27_P21, REACTOME_SCF_SKP2_MEDIATED_DEGRADATION_OF_P27_P21 REACTOME_NEGATIVE_REGULATION_OF_NOTCH4_SIGNALING, REACTOME_NEGATIVE_REGULATION_OF_NOTCH4_SIGNALING REACTOME_DOWNSTREAM_SIGNALING_EVENTS_OF_B_CELL_RECEPTOR_BCR, REACTOME_DOWNSTREAM_SIGNALING_EVENTS_OF_B_CELL_RECEPTOR_BCR REACTOME_DNA_STRAND_ELONGATION, REACTOME_DNA_STRAND_ELONGATION REACTOME_EXTENSION_OF_TELOMERES, REACTOME_EXTENSION_OF_TELOMERES REACTOME_BASE_EXCISION_REPAIR, REACTOME_BASE_EXCISION_REPAIR REACTOME G1 S DNA DAMAGE CHECKPOINTS, REACTOME G1 S DNA DAMAGE CHECKPOINTS REACTOME_DEGRADATION_OF_DVL, REACTOME_DEGRADATION_OF_DVL REACTOME_ACTIVATION_OF_ATR_IN_RESPONSE_TO_REPLICATION_STRESS, REACTOME_ACTIVATION_OF_ATR_IN_RESPONSE_TO_REPLICATION_STRESS REACTOME STABILIZATION OF P53, REACTOME STABILIZATION OF P53 REACTOME_REGULATION_OF_RUNX3_EXPRESSION_AND_ACTIVITY, REACTOME_REGULATION_OF_RUNX3_EXPRESSION_AND_ACTIVITY REACTOME_ASYMMETRIC_LOCALIZATION_OF_PCP_PROTEINS, REACTOME_ASYMMETRIC_LOCALIZATION_OF_PCP_PROTEINS REACTOME MEIOSIS, REACTOME MEIOSIS REACTOME_METABOLISM_OF_POLYAMINES, REACTOME_METABOLISM_OF_POLYAMINES REACTOME_REGULATION_OF_GENE_EXPRESSION_IN_BETA_CELLS, REACTOME_REGULATION_OF_GENE_EXPRESSION_IN_BETA_CELLS REACTOME_DEGRADATION_OF_AXIN, REACTOME_DEGRADATION_OF_AXIN REACTOME_DEGRADATION_OF_GLI1_BY_THE_PROTEASOME, REACTOME_DEGRADATION_OF_GLI1_BY_THE_PROTEASOME REACTOME_DECTIN_1_MEDIATED_NONCANONICAL_NF_KB_SIGNALING, REACTOME_DECTIN_1_MEDIATED_NONCANONICAL_NF_KB_SIGNALING REACTOME_HEDGEHOG_LIGAND_BIOGENESIS, REACTOME_HEDGEHOG_LIGAND_BIOGENESIS

ME S PHASE, REACTOME S PHASE

```
REACTOME_PCP_CE_PATHWAY, REACTOME_PCP_CE_PATHWAY
REACTOME SARS COV 2 INFECTION, REACTOME SARS COV 2 INFECTION
REACTOME_DISEASES_OF_PROGRAMMED_CELL_DEATH, REACTOME_DISEASES_OF_PROGRAMMED_CELL_DEATH
REACTOME THE ROLE OF GTSE1 IN G2 M PROGRESSION AFTER G2 CHECKPOINT, REACTOME THE ROLE OF GTSE1 IN G2 M PROGRESSION AFTER G2 CHECKPOINT
REACTOME_ACTIVATION_OF_THE_PRE_REPLICATIVE_COMPLEX, REACTOME_ACTIVATION_OF_THE_PRE_REPLICATIVE_COMPLEX
REACTOME_INTRINSIC_PATHWAY_FOR_APOPTOSIS, REACTOME_INTRINSIC_PATHWAY_FOR_APOPTOSIS
REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_ACETYLATION, REACTOME_REGULATION_OF_TP53_ACTIVITY_THROUGH_ACETYLATION
REACTOME_DEFECTIVE_CFTR_CAUSES_CYSTIC_FIBROSIS, REACTOME_DEFECTIVE_CFTR_CAUSES_CYSTIC_FIBROSIS
REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_GENES, REACTOME_TP53_REGULATES_TRANSCRIPTION_OF_CELL_CYCLE_GENES
REACTOME_INTERLEUKIN_17_SIGNALING, REACTOME_INTERLEUKIN_17_SIGNALING
REACTOME_E2F_MEDIATED_REGULATION_OF_DNA_REPLICATION, REACTOME_E2F_MEDIATED_REGULATION_OF_DNA_REPLICATION
REACTOME_HDR_THROUGH_SINGLE_STRAND_ANNEALING_SSA, REACTOME_HDR_THROUGH_SINGLE_STRAND_ANNEALING_SSA
REACTOME_RESOLUTION_OF_AP_SITES_VIA_THE_MULTIPLE_NUCLEOTIDE_PATCH_REPLACEMENT_PATHWAY, REACTOME_RESOLUTION_OF_AP_SITES_VIA_THE_MULTIPLE_NUCLEOTIDE_PATCH_REPLACEMENT_PATHWAY
```

REACTOME_REGULATION_OF_RAS_BY_GAPS, REACTOME_REGULATION_OF_RAS_BY_GAPS REACTOME_TELOMERE_C_STRAND_LAGGING_STRAND_SYNTHESIS, REACTOME_TELOMERE_C_STRAND_LAGGING_STRAND_SYNTHESIS REACTOME_G2_M_DNA_DAMAGE_CHECKPOINT, REACTOME_G2_M_DNA_DAMAGE_CHECKPOINT

REACTOME_SIGNALING_BY_NOTCH3, REACTOME_SIGNALING_BY_NOTCH3

REACTOME_C_TYPE_LECTIN_RECEPTORS_CLRS, REACTOME_C_TYPE_LECTIN_RECEPTORS_CLRS

REACTOME_OXIDATIVE_STRESS_INDUCED_SENESCENCE, REACTOME_OXIDATIVE_STRESS_INDUCED_SENESCENCE

REACTOME_PROCESSING_OF_DNA_DOUBLE_STRAND_BREAK_ENDS, REACTOME_PROCESSING_OF_DNA_DOUBLE_STRAND_BREAK_ENDS

REACTOME_MISMATCH_REPAIR, REACTOME_MISMATCH_REPAIR

REACTOME_HEDGEHOG_ON_STATE, REACTOME_HEDGEHOG_ON_STATE

REACTOME_HEDGEHOG_OFF_STATE, REACTOME_HEDGEHOG_OFF_STATE

REACTOME_TELOMERE_EXTENSION_BY_TELOMERASE, REACTOME_TELOMERE_EXTENSION_BY_TELOMERASE

REACTOME_MAPK6_MAPK4_SIGNALING, REACTOME_MAPK6_MAPK4_SIGNALING

REACTOME_REGULATION_OF_RUNX2_EXPRESSION_AND_ACTIVITY, REACTOME_REGULATION_OF_RUNX2_EXPRESSION_AND_ACTIVITY

REACTOME_TRANSCRIPTIONAL_REGULATION_BY_E2F6, REACTOME_TRANSCRIPTIONAL_REGULATION_BY_E2F6

REACTOME_INTERLEUKIN_1_SIGNALING, REACTOME_INTERLEUKIN_1_SIGNALING

REACTOME_CD28_DEPENDENT_PI3K_AKT_SIGNALING, REACTOME_CD28_DEPENDENT_PI3K_AKT_SIGNALING

REACTOME_FOXO_MEDIATED_TRANSCRIPTION, REACTOME_FOXO_MEDIATED_TRANSCRIPTION

REACTOME ACTIVATION OF BH3 ONLY PROTEINS, REACTOME ACTIVATION OF BH3 ONLY PROTEINS

REACTOME PCNA DEPENDENT LONG PATCH BASE EXCISION REPAIR, REACTOME PCNA DEPENDENT LONG PATCH BASE EXCISION REPAIR

REACTOME_LAGGING_STRAND_SYNTHESIS, REACTOME_LAGGING_STRAND_SYNTHESIS

REACTOME_DISEASES_OF_MITOTIC_CELL_CYCLE, REACTOME_DISEASES_OF_MITOTIC_CELL_CYCLE

REACTOME TRANSCRIPTIONAL REGULATION BY VENTX, REACTOME TRANSCRIPTIONAL REGULATION BY VENTX

REACTOME_ABERRANT_REGULATION_OF_MITOTIC_EXIT_IN_CANCER_DUE_TO_RB1_DEFECTS, REACTOME_ABERRANT_REGULATION_OF_MITOTIC_EXIT_IN_CANCER_DUE_TO_RB1_DEFECTS

REACTOME_SIGNALING_BY_NOTCH4, REACTOME_SIGNALING_BY_NOTCH4

REACTOME_CYCLIN_A_B1_B2_ASSOCIATED_EVENTS_DURING_G2_M_TRANSITION, REACTOME_CYCLIN_A_B1_B2_ASSOCIATED_EVENTS_DURING_G2_M_TRANSITION

REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS, REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT

REACTOME_ESTROGEN_DEPENDENT_NUCLEAR_EVENTS_DOWNSTREAM_OF_ESR_MEMBRANE_SIGNALING, REACTOME_ESTROGEN_DEPENDENT_NUCLEAR_EVENTS_DOWNSTREAM_OF_ESR_MEMBRANE_SIGNALING

REACTOME POLYMERASE_SWITCHING_ON_THE_C_STRAND_OF_THE_TELOMERE, REACTOME_POLYMERASE_SWITCHING_ON_THE_C_STRAND_OF_THE_TELOMERE

REACTOME_CDC6_ASSOCIATION_WITH_THE_ORC_ORIGIN_COMPLEX, REACTOME_CDC6_ASSOCIATION_WITH_THE_ORC_ORIGIN_COMPLEX

REACTOME_POLYMERASE_SWITCHING, REACTOME_POLYMERASE_SWITCHING

REACTOME_G1_S_SPECIFIC_TRANSCRIPTION, REACTOME_G1_S_SPECIFIC_TRANSCRIPTION REACTOME_PHOSPHORYLATION_OF_THE_APC_C, REACTOME_PHOSPHORYLATION_OF_THE_APC_C