

ME\_S\_PHASE, REACTOME\_S\_PHASE

REACTOME\_DNA\_REPLICATION, REACTOME\_DNA\_REPLICATION  
REACTOME\_SEPARATION\_OF\_SISTER\_CHROMATIDS, REACTOME\_SEPARATION\_OF\_SISTER\_CHROMATIDS  
WP\_DNA\_REPAIR\_PATHWAYS\_FULL\_NETWORK, WP\_DNA\_REPAIR\_PATHWAYS\_FULL\_NETWORK  
REACTOME\_MITOTIC\_G2\_G2\_M\_PHASES, REACTOME\_MITOTIC\_G2\_G2\_M\_PHASES  
REACTOME\_G2\_M\_CHECKPOINTS, REACTOME\_G2\_M\_CHECKPOINTS  
REACTOME\_GLOBAL\_GENOME\_NUCLEOTIDE\_EXCISION\_REPAIR\_GG\_NER, REACTOME\_GLOBAL\_GENOME\_NUCLEOTIDE\_EXCISION\_REPAIR\_GG\_NER  
REACTOME\_MITOTIC\_G1\_PHASE\_AND\_G1\_S\_TRANSITION, REACTOME\_MITOTIC\_G1\_PHASE\_AND\_G1\_S\_TRANSITION  
REACTOME\_SWITCHING\_OF\_ORIGINS\_TO\_A\_POST\_REPLICATIVE\_STATE, REACTOME\_SWITCHING\_OF\_ORIGINS\_TO\_A\_POST\_REPLICATIVE\_STATE  
REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_REPAIR, REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_REPAIR  
REACTOME\_DNA\_REPLICATION\_PRE\_INITIATION, REACTOME\_DNA\_REPLICATION\_PRE\_INITIATION  
REACTOME\_HOMOLOGY\_DIRECTED\_REPAIR, REACTOME\_HOMOLOGY\_DIRECTED\_REPAIR  
REACTOME\_APC\_C\_MEDIATED\_DEGRADATION\_OF\_CELL\_CYCLE\_PROTEINS, REACTOME\_APC\_C\_MEDIATED\_DEGRADATION\_OF\_CELL\_CYCLE\_PROTEINS  
REACTOME\_ORC1\_REMOVAL\_FROM\_CHROMATIN, REACTOME\_ORC1\_REMOVAL\_FROM\_CHROMATIN  
KEGG\_UBIQUITIN\_MEDIATED\_PROTEOLYSIS, KEGG\_UBIQUITIN\_MEDIATED\_PROTEOLYSIS  
REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY, REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY  
WP\_DNA\_IRDAMAGE\_AND\_CELLULAR\_RESPONSE\_VIA\_ATR, WP\_DNA\_IRDAMAGE\_AND\_CELLULAR\_RESPONSE\_VIA\_ATR  
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\_ASSEMBLY\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX, REACTOME\_ASSEMBLY\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX  
WP\_RETINOBLASTOMA\_GENE\_IN\_CANCER, WP\_RETINOBLASTOMA\_GENE\_IN\_CANCER  
WP\_MIRNAS\_INVOLVED\_IN\_DNA\_DAMAGE\_RESPONSE, WP\_MIRNAS\_INVOLVED\_IN\_DNA\_DAMAGE\_RESPONSE  
REACTOME\_UCH\_PROTEINASES, REACTOME\_UCH\_PROTEINASES  
REACTOME\_HDR\_THROUGH\_HOMOLOGOUS\_RECOMBINATION\_HRR, REACTOME\_HDR\_THROUGH\_HOMOLOGOUS\_RECOMBINATION\_HRR  
REACTOME\_PTEIN\_REGULATION, REACTOME\_PTEIN\_REGULATION  
REACTOME\_CYCLIN\_A\_CDK2\_ASSOCIATED\_EVENTS\_AT\_S\_PHASE\_ENTRY, REACTOME\_CYCLIN\_A\_CDK2\_ASSOCIATED\_EVENTS\_AT\_S\_PHASE\_ENTRY  
REACTOME\_ACTIVATION\_OF\_ATR\_IN\_RESPONSE\_TO\_REPLICATION\_STRESS, REACTOME\_ACTIVATION\_OF\_ATR\_IN\_RESPONSE\_TO\_REPLICATION\_STRESS  
WP\_DNA\_REPLICATION, WP\_DNA\_REPLICATION  
REACTOME\_ACTIVATION\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX, REACTOME\_ACTIVATION\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX  
REACTOME\_APOPTOSIS, REACTOME\_APOPTOSIS  
KEGG\_CELL\_CYCLE, KEGG\_CELL\_CYCLE  
REACTOME\_PROTEIN\_UBIQUITINATION, REACTOME\_PROTEIN\_UBIQUITINATION  
WP\_NUCLEOTIDE\_EXCISION\_REPAIR, WP\_NUCLEOTIDE\_EXCISION\_REPAIR  
REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY\_THROUGH\_PHOSPHORYLATION, REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY\_THROUGH\_PHOSPHORYLATION  
REACTOME\_DNA\_STRAND\_ELONGATION, REACTOME\_DNA\_STRAND\_ELONGATION  
KEGG\_DNA\_REPLICATION, KEGG\_DNA\_REPLICATION  
KEGG\_NUCLEOTIDE\_EXCISION\_REPAIR, KEGG\_NUCLEOTIDE\_EXCISION\_REPAIR  
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\_CELLULAR\_SENESCENCE, REACTOME\_CELLULAR\_SENESCENCE  
REACTOME\_EXTENSION\_OF\_TELOMERES, REACTOME\_EXTENSION\_OF\_TELOMERES  
REACTOME\_HOMOLOGOUS\_DNA\_PAIRING\_AND\_STRAND\_EXCHANGE, REACTOME\_HOMOLOGOUS\_DNA\_PAIRING\_AND\_STRAND\_EXCHANGE  
WP\_SPINAL\_CORD\_INJURY, WP\_SPINAL\_CORD\_INJURY  
REACTOME\_DOWNSTREAM\_SIGNALING\_EVENTS\_OF\_B\_CELL\_RECEPTOR\_BCR, REACTOME\_DOWNSTREAM\_SIGNALING\_EVENTS\_OF\_B\_CELL\_RECEPTOR\_BCR  
REACTOME\_PROCESSING\_OF\_DNA\_DOUBLE\_STRAND\_BREAK\_ENDS, REACTOME\_PROCESSING\_OF\_DNA\_DOUBLE\_STRAND\_BREAK\_ENDS  
REACTOME\_REGULATION\_OF\_PTEIN\_STABILITY\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_PTEIN\_STABILITY\_AND\_ACTIVITY  
WP\_CELL\_CYCLE, WP\_CELL\_CYCLE  
REACTOME\_REGULATION\_OF\_HMOX1\_EXPRESSION\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_HMOX1\_EXPRESSION\_AND\_ACTIVITY  
REACTOME\_DNA\_DAMAGE\_RECOGNITION\_IN\_GG\_NER, REACTOME\_DNA\_DAMAGE\_RECOGNITION\_IN\_GG\_NER  
REACTOME\_DECTIN\_1\_MEDIATED\_NONCANONICAL\_NF\_KB\_SIGNALING, REACTOME\_DECTIN\_1\_MEDIATED\_NONCANONICAL\_NF\_KB\_SIGNALING  
REACTOME\_HDR\_THROUGH\_SINGLE\_STRAND\_ANNHEALING\_SSA, REACTOME\_HDR\_THROUGH\_SINGLE\_STRAND\_ANNHEALING\_SSA  
REACTOME\_G2\_M\_DNA\_DAMAGE\_CHECKPOINT, REACTOME\_G2\_M\_DNA\_DAMAGE\_CHECKPOINT  
WP\_INTEGRATED\_BREAST\_CANCER\_PATHWAY, WP\_INTEGRATED\_BREAST\_CANCER\_PATHWAY  
KEGG\_ACUTE\_MYELOID\_LEUKEMIA, KEGG\_ACUTE\_MYELOID\_LEUKEMIA  
REACTOME\_AUFL\_HNRNP\_D0\_BINDS\_AND\_DESTABILIZES\_MRNA, REACTOME\_AUFL\_HNRNP\_D0\_BINDS\_AND\_DESTABILIZES\_MRNA  
REACTOME\_BASE\_EXCISION\_REPAIR, REACTOME\_BASE\_EXCISION\_REPAIR  
PID\_FANCONI\_PATHWAY, PID\_FANCONI\_PATHWAY  
REACTOME\_REGULATION\_OF\_RAS\_BY\_GAPS, REACTOME\_REGULATION\_OF\_RAS\_BY\_GAPS  
REACTOME\_NEGATIVE\_REGULATION\_OF\_NOTCH1\_SIGNALING, REACTOME\_NEGATIVE\_REGULATION\_OF\_NOTCH1\_SIGNALING  
REACTOME\_REGULATION\_OF\_RUNX3\_EXPRESSION\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_RUNX3\_EXPRESSION\_AND\_ACTIVITY  
REACTOME\_SCF\_SKP2\_MEDIATED\_DEGRADATION\_OF\_P27\_P21, REACTOME\_SCF\_SKP2\_MEDIATED\_DEGRADATION\_OF\_P27\_P21  
REACTOME\_DUAL\_INCISION\_IN\_GG\_NER, REACTOME\_DUAL\_INCISION\_IN\_GG\_NER  
REACTOME\_STABILIZATION\_OF\_P53, REACTOME\_STABILIZATION\_OF\_P53  
WP\_SIGNALING\_PATHWAYS\_IN\_GLIOMASTOMA, WP\_SIGNALING\_PATHWAYS\_IN\_GLIOMASTOMA  
REACTOME\_DNA\_DAMAGE\_TELOMERE\_STRESS\_INDUCED\_SENESCENCE, REACTOME\_DNA\_DAMAGE\_TELOMERE\_STRESS\_INDUCED\_SENESCENCE  
REACTOME\_CLEC7A\_DECTIN\_1\_SIGNALING, REACTOME\_CLEC7A\_DECTIN\_1\_SIGNALING  
REACTOME\_DEGRADATION\_OF\_AXIN, REACTOME\_DEGRADATION\_OF\_AXIN  
REACTOME\_FORMATION\_OF\_INCISION\_COMPLEX\_IN\_GG\_NER, REACTOME\_FORMATION\_OF\_INCISION\_COMPLEX\_IN\_GG\_NER  
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\_SENESCENCE\_ASSOCIATED\_SECRETORY\_PHENOTYPE\_SASP, REACTOME\_SENESCENCE\_ASSOCIATED\_SECRETORY\_PHENOTYPE\_SASP  
REACTOME\_TELOMERE\_C\_STRAND\_LAGGING\_STRAND\_SYNTHESIS, REACTOME\_TELOMERE\_C\_STRAND\_LAGGING\_STRAND\_SYNTHESIS  
REACTOME\_RUNX1\_REGULATES\_TRANSCRIPTION\_OF\_GENES\_INVOLVED\_IN\_DIFFERENTIATION\_OF\_HSCS, REACTOME\_RUNX1\_REGULATES\_TRANSCRIPTION\_OF\_GENES\_INVOLVED\_IN\_DIFFERENTIATION\_OF\_HSCS  
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\_ASYMMETRIC\_LOCALIZATION\_OF\_PCP\_PROTEINS, REACTOME\_ASYMMETRIC\_LOCALIZATION\_OF\_PCP\_PROTEINS  
BIOCARTA\_MCM\_PATHWAY, BIOCARTA\_MCM\_PATHWAY  
REACTOME\_OVARIAN\_TUMOR\_DOMAIN\_PROTEASES, REACTOME\_OVARIAN\_TUMOR\_DOMAIN\_PROTEASES  
REACTOME\_FANCONI\_ANEMIA\_PATHWAY, REACTOME\_FANCONI\_ANEMIA\_PATHWAY  
REACTOME\_SARS\_COV\_2\_INFECTION, REACTOME\_SARS\_COV\_2\_INFECTION  
REACTOME\_HEDGEHOG\_OFF\_STATE, REACTOME\_HEDGEHOG\_OFF\_STATE  
REACTOME\_DEGRADATION\_OF\_GLI1\_BY\_THE\_PROTEASOME, REACTOME\_DEGRADATION\_OF\_GLI1\_BY\_THE\_PROTEASOME  
KEGG\_CHRONIC\_MYELOID\_LEUKEMIA, KEGG\_CHRONIC\_MYELOID\_LEUKEMIA  
REACTOME\_MEIOSIS, REACTOME\_MEIOSIS  
REACTOME\_G1\_S\_DNA\_DAMAGE\_CHECKPOINTS, REACTOME\_G1\_S\_DNA\_DAMAGE\_CHECKPOINTS  
REACTOME\_DEGRADATION\_OF\_DVL, REACTOME\_DEGRADATION\_OF\_DVL  
REACTOME\_DEFECTIVE\_CFTR\_CAUSES\_CYSTIC\_FIBROSIS, REACTOME\_DEFECTIVE\_CFTR\_CAUSES\_CYSTIC\_FIBROSIS  
PID\_P53\_REGULATION\_PATHWAY, PID\_P53\_REGULATION\_PATHWAY  
KEGG\_HOMOLOGOUS\_RECOMBINATION, KEGG\_HOMOLOGOUS\_RECOMBINATION  
REACTOME\_DNA\_DAMAGE\_BYPASS, REACTOME\_DNA\_DAMAGE\_BYPASS  
REACTOME\_METABOLISM\_OF\_POLYAMINES, REACTOME\_METABOLISM\_OF\_POLYAMINES  
REACTOME\_ENDOSOMAL\_SORTING\_COMPLEX\_REQUIRED\_FOR\_TRANSPORT\_ESCRT, REACTOME\_ENDOSOMAL\_SORTING\_COMPLEX\_REQUIRED\_FOR\_TRANSPORT\_ESCRT  
REACTOME\_REGULATION\_OF\_RUNX2\_EXPRESSION\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_RUNX2\_EXPRESSION\_AND\_ACTIVITY  
REACTOME\_N\_GLYCAN\_TRIMMING\_IN\_THE\_ER\_AND\_CALNEXIN\_CALRETICULIN\_CYCLE, REACTOME\_N\_GLYCAN\_TRIMMING\_IN\_THE\_ER\_AND\_CALNEXIN\_CALRETICULIN\_CYCLE  
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\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES, REACTOME\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES  
REACTOME\_E3\_UBIQUITIN\_LIGASES\_UBIQUITINATE\_TARGET\_PROTEINS, REACTOME\_E3\_UBIQUITIN\_LIGASES\_UBIQUITINATE\_TARGET\_PROTEINS  
REACTOME\_PCP\_CE\_PATHWAY, REACTOME\_PCP\_CE\_PATHWAY  
WP\_DNA\_IRDOUBLE\_STRAND\_BREAKS\_DSBS\_AND\_CELLULAR\_RESPONSE\_VIA\_ATM, WP\_DNA\_IRDOUBLE\_STRAND\_BREAKS\_DSBS\_AND\_CELLULAR\_RESPONSE\_VIA\_ATM  
REACTOME\_INTERLEUKIN\_1\_SIGNALING, REACTOME\_INTERLEUKIN\_1\_SIGNALING  
PID\_BARD1\_PATHWAY, PID\_BARD1\_PATHWAY  
WP\_PARKINUBIQUITIN\_PROTEASOMAL\_SYSTEM\_PATHWAY, WP\_PARKINUBIQUITIN\_PROTEASOMAL\_SYSTEM\_PATHWAY  
REACTOME\_SIGNALING\_BY\_HEDGEHOG, REACTOME\_SIGNALING\_BY\_HEDGEHOG  
KEGG\_BASE\_EXCISION\_REPAIR, KEGG\_BASE\_EXCISION\_REPAIR  
REACTOME\_NEGATIVE\_REGULATORS\_OF\_DDX38\_IHH1\_SIGNALING, REACTOME\_NEGATIVE\_REGULATORS\_OF\_DDX38\_IHH1\_SIGNALING  
REACTOME\_MEIOTIC\_RECOMBINATION, REACTOME\_MEIOTIC\_RECOMBINATION  
REACTOME\_DISEASES\_OF\_PROGRAMMED\_CELL\_DEATH, REACTOME\_DISEASES\_OF\_PROGRAMMED\_CELL\_DEATH  
REACTOME\_TRANSLESION\_SYNTHESIS\_BY\_Y\_FAMILY\_DNA\_POLYMERASES\_BYPASSES\_LESIONS\_ON\_DNA\_TEMPLATE, REACTOME\_TRANSLESION\_SYNTHESIS\_BY\_Y\_FAMILY\_DNA\_POLYMERASES\_BYPASSES\_LESIONS\_ON\_DNA\_TEMPLATE  
KEGG\_PROTEASOME, KEGG\_PROTEASOME  
WP\_DNA\_MISMATCH\_REPAIR, WP\_DNA\_MISMATCH\_REPAIR  
KEGG\_MISMATCH\_REPAIR, KEGG\_MISMATCH\_REPAIR  
REACTOME\_ABC\_TRANSPORTER\_DISORDERS, REACTOME\_ABC\_TRANSPORTER\_DISORDERS  
WP\_DNA\_DAMAGE\_RESPONSE, WP\_DNA\_DAMAGE\_RESPONSE  
REACTOME\_UNWINDING\_OF\_DNA, REACTOME\_UNWINDING\_OF\_DNA  
REACTOME\_CALNEXIN\_CALRETICULIN\_CYCLE, REACTOME\_CALNEXIN\_CALRETICULIN\_CYCLE  
WP\_IL7\_SIGNALING\_PATHWAY, WP\_IL7\_SIGNALING\_PATHWAY  
PID\_ATR\_PATHWAY, PID\_ATR\_PATHWAY  
REACTOME\_CELLULAR\_RESPONSE\_TO\_HYPOXIA, REACTOME\_CELLULAR\_RESPONSE\_TO\_HYPOXIA  
REACTOME\_HEDGEHOG\_ON\_STATE, REACTOME\_HEDGEHOG\_ON\_STATE  
REACTOME\_MAPK6\_MAPK4\_SIGNALING, REACTOME\_MAPK6\_MAPK4\_SIGNALING  
KEGG\_PANCREATIC\_CANCER, KEGG\_PANCREATIC\_CANCER  
WP\_PANCREATIC\_ADENOCARCINOMA\_PATHWAY, WP\_PANCREATIC\_ADENOCARCINOMA\_PATHWAY  
PID\_P73PATHWAY, PID\_P73PATHWAY  
KEGG\_OOCYTE\_MEIOSIS, KEGG\_OOCYTE\_MEIOSIS  
KEGG\_NON\_SMALL\_CELL\_LUNG\_CANCER, KEGG\_NON\_SMALL\_CELL\_LUNG\_CANCER  
REACTOME\_APC\_C\_CDC20\_MEDIATED\_DEGRADATION\_OF\_CYCLIN\_B, REACTOME\_APC\_C\_CDC20\_MEDIATED\_DEGRADATION\_OF\_CYCLIN\_B  
REACTOME\_LAGGING\_STRAND\_SYNTHESIS, REACTOME\_LAGGING\_STRAND\_SYNTHESIS  
WP\_ERBB\_SIGNALING\_PATHWAY, WP\_ERBB\_SIGNALING\_PATHWAY  
WP\_BASE\_EXCISION\_REPAIR, WP\_BASE\_EXCISION\_REPAIR  
REACTOME\_PCNA\_DEPENDENT\_LONG\_PATCH\_BASE\_EXCISION\_REPAIR, REACTOME\_PCNA\_DEPENDENT\_LONG\_PATCH\_BASE\_EXCISION\_REPAIR  
WP\_NONSMALL\_CELL\_LUNG\_CANCER, WP\_NONSMALL\_CELL\_LUNG\_CANCER  
REACTOME\_MYD88\_INDEPENDENT\_TLR4\_CASCADE, REACTOME\_MYD88\_INDEPENDENT\_TLR4\_CASCADE  
KEGG\_ERBB\_SIGNALING\_PATHWAY, KEGG\_ERBB\_SIGNALING\_PATHWAY  
WP\_HEAD\_AND\_NECK\_SQUAMOUS\_CELL\_CARCINOMA, WP\_HEAD\_AND\_NECK\_SQUAMOUS\_CELL\_CARCINOMA  
SIG\_PIP3\_SIGNALING\_IN\_CARDIAC\_MYOCYTES, SIG\_PIP3\_SIGNALING\_IN\_CARDIAC\_MYOCYTES  
REACTOME\_TRANSLATION\_OF\_SARS\_COV\_2\_STRUCTURAL\_PROTEINS, REACTOME\_TRANSLATION\_OF\_SARS\_COV\_2\_STRUCTURAL\_PROTEINS  
REACTOME\_CROSS\_PRESENTATION\_OF\_SOLUBLE\_EXOGENOUS\_ANTIgens\_ENDOSOMES, REACTOME\_CROSS\_PRESENTATION\_OF\_SOLUBLE\_EXOGENOUS\_ANTIgens\_ENDOSOMES  
KEGG\_ENDOMETRIAL\_CANCER, KEGG\_ENDOMETRIAL\_CANCER  
PID\_PLK1\_PATHWAY, PID\_PLK1\_PATHWAY  
REACTOME\_E2F\_MEDIATED\_REGULATION\_OF\_DNA\_REPLICATION, REACTOME\_E2F\_MEDIATED\_REGULATION\_OF\_DNA\_REPLICATION  
WP\_MELANOMA, WP\_MELANOMA  
REACTOME\_POLYMERASE\_SWITCHING\_ON\_THE\_C\_STRAND\_OF\_THE\_TELOMERE, REACTOME\_POLYMERASE\_SWITCHING\_ON\_THE\_C\_STRAND\_OF\_THE\_TELOMERE  
REACTOME\_BUDDING\_AND\_MATURATION\_OF\_HIV\_VIRION, REACTOME\_BUDDING\_AND\_MATURATION\_OF\_HIV\_VIRION  
REACTOME\_RECOGNITION\_OF\_DNA\_DAMAGE\_BY\_PCNA\_CONTAINING\_REPLICATION\_COMPLEX, REACTOME\_RECOGNITION\_OF\_DNA\_DAMAGE\_BY\_PCNA\_CONTAINING\_REPLICATION\_COMPLEX  
REACTOME\_APC\_CDC20\_MEDIATED\_DEGRADATION\_OF\_NEK2A, REACTOME\_APC\_CDC20\_MEDIATED\_DEGRADATION\_OF\_NEK2A  
REACTOME\_HEDGEHOG\_LIGAND\_BIOGENESIS, REACTOME\_HEDGEHOG\_LIGAND\_BIOGENESIS  
REACTOME\_GAP\_FILLING\_DNA\_REPAIR\_SYNTHESIS\_AND\_LIGATION\_IN\_GG\_NER, REACTOME\_GAP\_FILLING\_DNA\_REPAIR\_SYNTHESIS\_AND\_LIGATION\_IN\_GG\_NER  
REACTOME\_GLYCOGEN\_METABOLISM, REACTOME\_GLYCOGEN\_METABOLISM  
KEGG\_COLORECTAL\_CANCER, KEGG\_COLORECTAL\_CANCER  
REACTOME\_BETA\_CATENIN\_INDEPENDENT\_WNT\_SIGNALING, REACTOME\_BETA\_CATENIN\_INDEPENDENT\_WNT\_SIGNALING  
REACTOME\_POLYMERASE\_SWITCHING, REACTOME\_POLYMERASE\_SWITCHING  
REACTOME\_INTRINSIC\_PATHWAY\_FOR\_APOPTOSIS, REACTOME\_INTRINSIC\_PATHWAY\_FOR\_APOPTOSIS  
REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_E2F6, REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_E2F6  
WP\_LIPID\_METABOLISM\_PATHWAY, WP\_LIPID\_METABOLISM\_PATHWAY  
SIG\_PIP3\_SIGNALING\_IN\_B\_LYMPHOCYTES, SIG\_PIP3\_SIGNALING\_IN\_B\_LYMPHOCYTES  
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\_MEIOTIC\_SYNAPSIS, REACTOME\_MEIOTIC\_SYNAPSIS  
REACTOME\_G1\_S\_SPECIFIC\_TRANSCRIPTION, REACTOME\_G1\_S\_SPECIFIC\_TRANSCRIPTION  
PID\_RETINOIC\_ACID\_PATHWAY, PID\_RETINOIC\_ACID\_PATHWAY  
WP\_TUMOR\_SUPPRESSOR\_ACTIVITY\_OF\_SMARCB1, WP\_TUMOR\_SUPPRESSOR\_ACTIVITY\_OF\_SMARCB1  
REACTOME\_REGULATION\_OF\_TP53\_EXPRESSION\_AND\_DEGRADATION, REACTOME\_REGULATION\_OF\_TP53\_EXPRESSION\_AND\_DEGRADATION  
REACTOME\_ACTIVATION\_OF\_BH3\_ONLY\_PROTEINS, REACTOME\_ACTIVATION\_OF\_BH3\_ONLY\_PROTEINS  
WP\_MIRNA\_REGULATION\_OF\_DNA\_DAMAGE\_RESPONSE, WP\_MIRNA\_REGULATION\_OF\_DNA\_DAMAGE\_RESPONSE  
REACTOME\_PHOSPHORYLATION\_OF\_THE\_APC\_C, REACTOME\_PHOSPHORYLATION\_OF\_THE\_APC\_C  
REACTOME\_ABBERRANT\_REGULATION\_OF\_MITOTIC\_EXIT\_IN\_CANCER\_DUE\_TO\_RBI\_DEFECTS, REACTOME\_ABBERRANT\_REGULATION\_OF\_MITOTIC\_EXIT\_IN\_CANCER\_DUE\_TO\_RBI\_DEFECTS  
REACTOME\_TERMINATION\_OF\_TRANSLESION\_DNA\_SYNTHESIS, REACTOME\_TERMINATION\_OF\_TRANSLESION\_DNA\_SYNTHESIS  
REACTOME\_EGFR\_DOWNREGULATION, REACTOME\_EGFR\_DOWNREGULATION  
REACTOME\_ER\_QUALITY\_CONTROL\_COMPARTMENT\_ERQC, REACTOME\_ER\_QUALITY\_CONTROL\_COMPARTMENT\_ERQC  
WP\_DNA\_DAMAGE\_RESPONSE\_ONLY\_ATM\_DEPENDENT, WP\_DNA\_DAMAGE\_RESPONSE\_ONLY\_ATM\_DEPENDENT  
SIG\_BCR\_SIGNALING\_PATHWAY, SIG\_BCR\_SIGNALING\_PATHWAY  
PID\_AURORA\_A\_PATHWAY, PID\_AURORA\_A\_PATHWAY  
WP\_TGFBETA\_SIGNALING\_PATHWAY, WP\_TGFBETA\_SIGNALING\_PATHWAY  
REACTOME\_SARS\_COV\_1\_INFECTION, REACTOME\_SARS\_COV\_1\_INFECTION  
REACTOME\_TNF\_SIGNALING, REACTOME\_TNF\_SIGNALING  
REACTOME\_INTERLEUKIN\_3\_INTERLEUKIN\_5\_AND\_GM-CSF\_SIGNALING, REACTOME\_INTERLEUKIN\_3\_INTERLEUKIN\_5\_AND\_GM-CSF\_SIGNALING  
WP\_CHROMOSOMAL\_AND\_MICROSATELLITE\_INSTABILITY\_IN\_COLORECTAL\_CANCER, WP\_CHROMOSOMAL\_AND\_MICROSATELLITE\_INSTABILITY\_IN\_COLORECTAL\_CANCER  
PID\_MYC\_PATHWAY, PID\_MYC\_PATHWAY  
KEGG\_MELANOMA, KEGG\_MELANOMA  
REACTOME\_DISEASES\_OF\_CARBOHYDRATE\_METABOLISM, REACTOME\_DISEASES\_OF\_CARBOHYDRATE\_METABOLISM  
REACTOME\_SIGNALING\_BY\_EGFR, REACTOME\_SIGNALING\_BY\_EGFR  
REACTOME\_SIGNALING\_BY\_NOTCH4, REACTOME\_SIGNALING\_BY\_NOTCH4  
KEGG\_TGF\_BETA\_SIGNALING\_PATHWAY, KEGG\_TGF\_BETA\_SIGNALING\_PATHWAY  
REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_RUNX2, REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_RUNX2  
SA\_TRKA\_RECEPTOR, SA\_TRKA\_RECEPTOR  
SA\_PTEIN\_PATHWAY, SA\_PTEIN\_PATHWAY  
REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY\_THROUGH\_ACETYLATION, REACTOME\_REGULATION\_OF\_TP53\_ACTIVITY\_THROUGH\_ACETYLATION  
REACTOME\_LATE\_ENDOSOMAL\_MICROAUTOPHAGY, REACTOME\_LATE\_ENDOSOMAL\_MICROAUTOPHAGY  
REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_RUNX3, REACTOME\_TRANSCRIPTIONAL\_REGULATION\_BY\_RUNX3  
WP\_EGFR\_TYROSINE\_KINASE\_INHIBITOR\_RESISTANCE, WP\_EGFR\_TYROSINE\_KINASE\_INHIBITOR\_RESISTANCE  
KEGG\_PROGESTERONE\_MEDIATED\_OOCYTE\_MATURATION, KEGG\_PROGESTERONE\_MEDIATED\_OOCYTE\_MATURATION  
BIOCARTA\_PROTEASOME\_PATHWAY, BIOCARTA\_PROTEASOME\_PATHWAY  
WP\_G1\_TO\_S\_CELL\_CYCLE\_CONTROL, WP\_G1\_TO\_S\_CELL\_CYCLE\_CONTROL  
WP\_RESISTIN\_AS\_A\_REGULATOR\_OF\_INFLAMMATION, WP\_RESISTIN\_AS\_A\_REGULATOR\_OF\_INFLAMMATION  
REACTOME\_TRANSCRIPTION\_OF\_E2F\_TARGETS\_UNDER\_NEGATIVE\_CONTROL\_BY\_DREAM\_COMPLEX, REACTOME\_TRANSCRIPTION\_OF\_E2F\_TARGETS\_UNDER\_NEGATIVE\_CONTROL\_BY\_DREAM\_COMPLEX  
REACTOME\_CDC6\_ASSOCIATION\_WITH\_THE\_ORC\_ORIGIN\_COMPLEX, REACTOME\_CDC6\_ASSOCIATION\_WITH\_THE\_ORC\_ORIGIN\_COMPLEX  
REACTOME\_SIGNALING\_BY\_TGF\_BETA\_RECEPTOR\_COMPLEX, REACTOME\_SIGNALING\_BY\_TGF\_BETA\_RECEPTOR\_COMPLEX  
REACTOME\_TOLL\_LIKE\_RECEPTOR\_CASCADES, REACTOME\_TOLL\_LIKE\_RECEPTOR\_CASCADES  
KEGG\_GLIOMA, KEGG\_GLIOMA  
REACTOME\_CONVERSION\_FROM\_APC\_C\_CDC20\_TO\_APC\_C\_CDH1\_IN\_LATE\_ANAPHASE, REACTOME\_CONVERSION\_FROM\_APC\_C\_CDC20\_TO\_APC\_C\_CDH1\_IN\_LATE\_ANAPHASE  
REACTOME\_G0\_AND\_EARLY\_G1, REACTOME\_G0\_AND\_EARLY\_G1  
REACTOME\_TOLL\_LIKE\_RECEPTOR\_9\_TLR9\_CASCADE, REACTOME\_TOLL\_LIKE\_RECEPTOR\_9\_TLR9\_CASCADE  
REACTOME\_PROCESSIVE\_SYNTHESIS\_ON\_THE\_C\_STRAND\_OF\_THE\_TELOMERE, REACTOME\_PROCESSIVE\_SYNTHESIS\_ON\_THE\_C\_STRAND\_OF\_THE\_TELOMERE  
REACTOME\_REPRODUCTION, REACTOME\_REPRODUCTION  
REACTOME\_INTERLEUKIN\_1\_FAMILY\_SIGNALING, REACTOME\_INTERLEUKIN\_1\_FAMILY\_SIGNALING  
REACTOME\_REGULATION\_OF\_SIGNALING\_BY\_CBL, REACTOME\_REGULATION\_OF\_SIGNALING\_BY\_CBL  
WP\_ANDROGEN\_RECEPTOR\_SIGNALING\_PATHWAY, WP\_ANDROGEN\_RECEPTOR\_SIGNALING\_PATHWAY  
REACTOME\_TELOMERE\_EXTENSION\_BY\_TELOMERASE, REACTOME\_TELOMERE\_EXTENSION\_BY\_TELOMERASE  
WP\_BLADDER\_CANCER, WP\_BLADDER\_CANCER  
SIG\_IL4RECEPTOR\_IN\_B\_LYMPHOCYTES, SIG\_IL4RECEPTOR\_IN\_B\_LYMPHOCYTES  
WP\_ATM\_SIGNALING\_PATHWAY, WP\_ATM\_SIGNALING\_PATHWAY  
WP\_PROTEASOME\_DEGRADATION, WP\_PROTEASOME\_DEGRADATION  
REACTOME\_C\_TYPE\_LECTIN\_RECEPTORS\_CLRS, REACTOME\_C\_TYPE\_LECTIN\_RECEPTORS\_CLRS  
WP\_INTEGRATED\_CANCER\_PATHWAY, WP\_INTEGRATED\_CANCER\_PATHWAY  
REACTOME\_PROCESSIVE\_SYNTHESIS\_ON\_THE\_LAGGING\_STRAND, REACTOME\_PROCESSIVE\_SYNTHESIS\_ON\_THE\_LAGGING\_STRAND  
REACTOME\_REGULATED\_NECROSIS, REACTOME\_REGULATED\_NECROSIS  
WP\_REGULATION\_OF\_SISTER\_CHROMATID\_SEPARATION\_AT\_THE\_METAPHASEANAPHASE\_TRANSITION, WP\_REGULATION\_OF\_SISTER\_CHROMATID\_SEPARATION\_AT\_THE\_METAPHASEANAPHASE\_TRANSITION  
REACTOME\_MISMATCH\_REPAIR, REACTOME\_MISMATCH\_REPAIR  
PID\_TELOMERASE\_PATHWAY, PID\_TELOMERASE\_PATHWAY  
WP\_THE\_EFFECT\_OF\_PROGERIN\_ON\_THE\_INVOLVED\_GENES\_IN\_HUTCHINSONGILFORD\_PROGERIA\_SYNDROME, WP\_THE\_EFFECT\_OF\_PROGERIN\_ON\_THE\_INVOLVED\_GENES\_IN\_HUTCHINSONGILFORD\_PROGERIA\_SYNDROME  
WP\_NUCLEOTIDE\_METABOLISM, WP\_NUCLEOTIDE\_METABOLISM  
BIOCARTA\_ERAD\_PATHWAY, BIOCARTA\_ERAD\_PATHWAY  
REACTOME\_REGULATION\_OF\_TNFR1\_SIGNALING, REACTOME\_REGULATION\_OF\_TNFR1\_SIGNALING  
WP\_ENDOMETRIAL\_CANCER, WP\_ENDOMETRIAL\_CANCER  
REACTOME\_FOXO\_MEDIATED\_TRANSCRIPTION, REACTOME\_FOXO\_MEDIATED\_TRANSCRIPTION  
REACTOME\_TRANSCRIPTIONAL\_REGULATION\_OF GRANULPOIESIS, REACTOME\_TRANSCRIPTIONAL\_REGULATION\_OF GRANULPOIESIS  
WP\_MAMMARY\_GLAND\_DEVELOPMENT\_STAGE\_1\_OF\_4, WP\_MAMMARY\_GLAND\_DEVELOPMENT\_STAGE\_1\_OF\_4  
REACTOME\_DISEASES\_OF\_MITOTIC\_CELL\_CYCLE, REACTOME\_DISEASES\_OF\_MITOTIC\_CELL\_CYCLE