

ME\_S\_PHASE, REACTOME\_S\_PHASE

PUJANA\_BRCA\_CENTERED\_NETWORK, PUJANA\_BRCA\_CENTERED\_NETWORK  
SAKAI\_TUMOR\_INFILTRATING\_MONOCYTES\_DN, SAKAI\_TUMOR\_INFILTRATING\_MONOCYTES\_DN  
REACTOME\_MITOTIC\_G1\_PHASE\_AND\_G1\_S\_TRANSITION, REACTOME\_MITOTIC\_G1\_PHASE\_AND\_G1\_S\_TRANSITION  
REACTOME\_DNA\_REPLICATION, REACTOME\_DNA\_REPLICATION  
REACTOME\_CYCLIN\_A\_B1\_B2\_ASSOCIATED\_EVENTS\_DURING\_G2\_M\_TRANSITION, REACTOME\_CYCLIN\_A\_B1\_B2\_ASSOCIATED\_EVENTS\_DURING\_G2\_M\_TRANSITION  
REACTOME\_DEGRADATION\_OF\_BETA\_CATENIN\_BY\_THE\_DESTRUCTION\_COMPLEX, REACTOME\_DEGRADATION\_OF\_BETA\_CATENIN\_BY\_THE\_DESTRUCTION\_COMPLEX  
PUJANA\_XPRSS\_INT\_NETWORK, PUJANA\_XPRSS\_INT\_NETWORK  
REACTOME\_DECTIN\_1\_MEDIATED\_NONCANONICAL\_NF\_KB\_SIGNALING, REACTOME\_DECTIN\_1\_MEDIATED\_NONCANONICAL\_NF\_KB\_SIGNALING  
REACTOME\_REGULATION\_OF\_PTEN\_STABILITY\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_PTEN\_STABILITY\_AND\_ACTIVITY  
REACTOME\_ASYMMETRIC\_LOCALIZATION\_OF\_PCP\_PROTEINS, REACTOME\_ASYMMETRIC\_LOCALIZATION\_OF\_PCP\_PROTEINS  
REACTOME\_REGULATION\_OF\_RAS\_BY\_GAPS, REACTOME\_REGULATION\_OF\_RAS\_BY\_GAPS  
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  
KAUFFMANN\_DNA\_REPLICATION\_GENES, KAUFFMANN\_DNA\_REPLICATION\_GENES  
REACTOME\_DEGRADATION\_OF\_DVL, REACTOME\_DEGRADATION\_OF\_DVL  
REACTOME\_SUMOYLATION, REACTOME\_SUMOYLATION  
REACTOME\_HEDGEHOG\_LIGAND\_BIOGENESIS, REACTOME\_HEDGEHOG\_LIGAND\_BIOGENESIS  
REACTOME\_SEPARATION\_OF\_SISTER\_CHROMATIDS, REACTOME\_SEPARATION\_OF\_SISTER\_CHROMATIDS  
REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_REPAIR, REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_REPAIR  
HOFFMANN\_LARGE\_TO\_SMALL\_PRE\_BII\_LYMPHOCYTE\_UP, HOFFMANN\_LARGE\_TO\_SMALL\_PRE\_BII\_LYMPHOCYTE\_UP  
REACTOME\_MITOTIC\_G2\_G2\_M\_PHASES, REACTOME\_MITOTIC\_G2\_G2\_M\_PHASES  
REACTOME\_SWITCHING\_OF\_ORIGINS\_TO\_A\_POST\_REPLICATIVE\_STATE, REACTOME\_SWITCHING\_OF\_ORIGINS\_TO\_A\_POST\_REPLICATIVE\_STATE  
REACTOME\_DEGRADATION\_OF\_GLI1\_BY\_THE\_PROTEASOME, REACTOME\_DEGRADATION\_OF\_GLI1\_BY\_THE\_PROTEASOME  
REACTOME\_APC\_C\_MEDIATED\_DEGRADATION\_OF\_CELL\_CYCLE\_PROTEINS, REACTOME\_APC\_C\_MEDIATED\_DEGRADATION\_OF\_CELL\_CYCLE\_PROTEINS  
REACTOME\_RECOGNITION\_OF\_DNA\_DAMAGE\_BY\_PCNA\_CONTAINING\_REPLICATION\_COMPLEX, REACTOME\_RECOGNITION\_OF\_DNA\_DAMAGE\_BY\_PCNA\_CONTAINING\_REPLICATION\_COMPLEX  
REACTOME\_STABILIZATION\_OF\_P53, REACTOME\_STABILIZATION\_OF\_P53  
REACTOME\_ASSEMBLY\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX, REACTOME\_ASSEMBLY\_OF\_THE\_PRE\_REPLICATIVE\_COMPLEX  
REACTOME\_DNA\_REPLICATION\_PRE\_INITIATION, REACTOME\_DNA\_REPLICATION\_PRE\_INITIATION  
PID\_HEDGEHOG\_GLI\_PATHWAY, PID\_HEDGEHOG\_GLI\_PATHWAY  
REACTOME\_DEGRADATION\_OF\_AXIN, REACTOME\_DEGRADATION\_OF\_AXIN  
REACTOME\_REGULATION\_OF\_RUNX3\_EXPRESSION\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_RUNX3\_EXPRESSION\_AND\_ACTIVITY  
PID\_PLK1\_PATHWAY, PID\_PLK1\_PATHWAY  
REACTOME\_ORC1\_REMOVAL\_FROM\_CHROMATIN, REACTOME\_ORC1\_REMOVAL\_FROM\_CHROMATIN  
REACTOME\_THE\_ROLE\_OF\_CTSE1\_IN\_G2\_M\_PROGRESSION\_AFTER\_G2\_CHECKPOINT, REACTOME\_THE\_ROLE\_OF\_CTSE1\_IN\_G2\_M\_PROGRESSION\_AFTER\_G2\_CHECKPOINT  
REACTOME\_CROSS\_PRESENTATION\_OF\_SOLUBLE\_EXOGENOUS\_ANTIGENS\_ENDOSOMES, REACTOME\_CROSS\_PRESENTATION\_OF\_SOLUBLE\_EXOGENOUS\_ANTIGENS\_ENDOSOMES  
REACTOME\_HOMOLOGY\_DIRECTED\_REPAIR, REACTOME\_HOMOLOGY\_DIRECTED\_REPAIR  
REACTOME\_CYCLIN\_A\_CDK2\_ASSOCIATED\_EVENTS\_AT\_S\_PHASE\_ENTRY, REACTOME\_CYCLIN\_A\_CDK2\_ASSOCIATED\_EVENTS\_AT\_S\_PHASE\_ENTRY  
PUJANA\_BREAST\_CANCER\_WITH\_BRCA1\_MUTATED\_UP, PUJANA\_BREAST\_CANCER\_WITH\_BRCA1\_MUTATED\_UP  
PID\_PRL\_SIGNALING\_EVENTS\_PATHWAY, PID\_PRL\_SIGNALING\_EVENTS\_PATHWAY  
MORI\_LARGE\_PRE\_BII\_LYMPHOCYTE\_UP, MORI\_LARGE\_PRE\_BII\_LYMPHOCYTE\_UP  
KEGG\_UBIQUITIN\_MEDIATED\_PROTEOLYSIS, KEGG\_UBIQUITIN\_MEDIATED\_PROTEOLYSIS  
REACTOME\_REGULATION\_OF\_MRNA\_STABILITY\_BY\_PROTEINS\_THAT\_BIND\_AU\_RICH\_ELEMENTS, REACTOME\_REGULATION\_OF\_MRNA\_STABILITY\_BY\_PROTEINS\_THAT\_BIND\_AU\_RICH\_ELEMENTS  
SARRIO\_EPITHELIAL\_MESENCHYMAL\_TRANSITION\_UP, SARRIO\_EPITHELIAL\_MESENCHYMAL\_TRANSITION\_UP  
VILLANUEVA\_LIVER\_CANCER\_KRT19\_UP, VILLANUEVA\_LIVER\_CANCER\_KRT19\_UP  
REACTOME\_RUNX1\_REGULATES\_TRANSCRIPTION\_OF\_GENES\_INVOLVED\_IN\_DIFFERENTIATION\_OF\_HSCS, REACTOME\_RUNX1\_REGULATES\_TRANSCRIPTION\_OF\_GENES\_INVOLVED\_IN\_DIFFERENTIATION\_OF\_HSCS  
REACTOME\_ANTIGEN\_PROCESSING\_CROSS\_PRESENTATION, REACTOME\_ANTIGEN\_PROCESSING\_CROSS\_PRESENTATION  
REACTOME\_CYCLIN\_D\_ASSOCIATED\_EVENTS\_IN\_G1, REACTOME\_CYCLIN\_D\_ASSOCIATED\_EVENTS\_IN\_G1  
MORI\_IMMATURE\_B\_LYMPHOCYTE\_DN, MORI\_IMMATURE\_B\_LYMPHOCYTE\_DN  
LI\_WILMS\_TUMOR\_VS\_FETAL\_KIDNEY\_1\_DN, LI\_WILMS\_TUMOR\_VS\_FETAL\_KIDNEY\_1\_DN  
REACTOME\_MITOPHAGY, REACTOME\_MITOPHAGY  
REACTOME\_HEDGEHOG\_OFF\_STATE, REACTOME\_HEDGEHOG\_OFF\_STATE  
LEE\_LIVER\_CANCER\_SURVIVAL\_DN, LEE\_LIVER\_CANCER\_SURVIVAL\_DN  
REACTOME\_IRON\_UPTAKE\_AND\_TRANSPORT, REACTOME\_IRON\_UPTAKE\_AND\_TRANSPORT  
ODONNELL\_TFRC\_TARGETS\_DN, ODONNELL\_TFRC\_TARGETS\_DN  
REACTOME\_PCP\_CE\_PATHWAY, REACTOME\_PCP\_CE\_PATHWAY  
REACTOME\_TERMINATION\_OF\_TRANSLESION\_DNA\_SYNTHESIS, REACTOME\_TERMINATION\_OF\_TRANSLESION\_DNA\_SYNTHESIS  
REACTOME\_AUF1\_HNRNP\_D0\_BINDS\_AND\_DESTABILIZES\_MRNA, REACTOME\_AUF1\_HNRNP\_D0\_BINDS\_AND\_DESTABILIZES\_MRNA  
REACTOME\_SUMOYLATION\_OF\_DNA\_DAMAGE\_RESPONSE\_AND\_REPAIR\_PROTEINS, REACTOME\_SUMOYLATION\_OF\_DNA\_DAMAGE\_RESPONSE\_AND\_REPAIR\_PROTEINS  
KAMMINGA\_EZH2\_TARGETS, KAMMINGA\_EZH2\_TARGETS  
REACTOME\_DNA\_DAMAGE\_BYPASS, REACTOME\_DNA\_DAMAGE\_BYPASS  
KEGG\_PROTEASOME, KEGG\_PROTEASOME  
JAZAERI\_BREAST\_CANCER\_BRCA1\_VS\_BRCA2\_UP, JAZAERI\_BREAST\_CANCER\_BRCA1\_VS\_BRCA2\_UP  
REACTOME\_NEGATIVE\_REGULATION\_OF\_NOTCH4\_SIGNALING, REACTOME\_NEGATIVE\_REGULATION\_OF\_NOTCH4\_SIGNALING  
BIOCARTA\_GLEEVEC\_PATHWAY, BIOCARTA\_GLEEVEC\_PATHWAY  
REACTOME\_DEFECTIVE\_CFTR\_CAUSES\_CYSTIC\_FIBROSIS, REACTOME\_DEFECTIVE\_CFTR\_CAUSES\_CYSTIC\_FIBROSIS  
REACTOME\_RIPK1\_MEDIATED\_REGULATED\_NECROSIS, REACTOME\_RIPK1\_MEDIATED\_REGULATED\_NECROSIS  
REACTOME\_REGULATION\_OF\_RUNX2\_EXPRESSION\_AND\_ACTIVITY, REACTOME\_REGULATION\_OF\_RUNX2\_EXPRESSION\_AND\_ACTIVITY  
REACTOME\_REGULATION\_OF\_EXPRESSION\_OF\_SLITS\_AND\_ROBOS, REACTOME\_REGULATION\_OF\_EXPRESSION\_OF\_SLITS\_AND\_ROBOS  
PYEON\_CANCER\_HEAD\_AND\_NECK\_VS\_CERVICAL\_UP, PYEON\_CANCER\_HEAD\_AND\_NECK\_VS\_CERVICAL\_UP  
BIOCARTA\_HCMV\_PATHWAY, BIOCARTA\_HCMV\_PATHWAY  
KEGG\_CELL\_CYCLE, KEGG\_CELL\_CYCLE  
REACTOME\_NEGATIVE\_REGULATION\_OF\_MAPK\_PATHWAY, REACTOME\_NEGATIVE\_REGULATION\_OF\_MAPK\_PATHWAY  
REACTOME\_TRANSLESION\_SYNTHESIS\_BY\_POLK, REACTOME\_TRANSLESION\_SYNTHESIS\_BY\_POLK  
REACTOME\_HEDGEHOG\_ON\_STATE, REACTOME\_HEDGEHOG\_ON\_STATE  
KEGG\_PANCREATIC\_CANCER, KEGG\_PANCREATIC\_CANCER  
REACTOME\_DOWNSTREAM\_SIGNALING\_EVENTS\_OF\_B\_CELL\_RECEPTOR\_BCR, REACTOME\_DOWNSTREAM\_SIGNALING\_EVENTS\_OF\_B\_CELL\_RECEPTOR\_BCR  
WHITEFORD\_PEDIATRIC\_CANCER\_MARKERS, WHITEFORD\_PEDIATRIC\_CANCER\_MARKERS  
SESTO\_RESPONSE\_TO\_UV\_C0, SESTO\_RESPONSE\_TO\_UV\_C0  
SHEPARD\_BMYB\_MORPHOLINO\_DN, SHEPARD\_BMYB\_MORPHOLINO\_DN  
REACTOME\_ABC\_TRANSPORTER\_DISORDERS, REACTOME\_ABC\_TRANSPORTER\_DISORDERS  
REACTOME\_REGULATION\_OF\_TP53\_EXPRESSION\_AND\_DEGRADATION, REACTOME\_REGULATION\_OF\_TP53\_EXPRESSION\_AND\_DEGRADATION  
VANTVEER\_BREAST\_CANCER\_POOR\_PROGNOSIS, VANTVEER\_BREAST\_CANCER\_POOR\_PROGNOSIS  
BIOCARTA\_IGFIMTOR\_PATHWAY, BIOCARTA\_IGFIMTOR\_PATHWAY  
REACTOME\_ESTROGEN\_DEPENDENT\_NUCLEAR\_EVENTS\_DOWNSTREAM\_OF\_ESR\_MEMBRANE\_SIGNALING, REACTOME\_ESTROGEN\_DEPENDENT\_NUCLEAR\_EVENTS\_DOWNSTREAM\_OF\_ESR\_MEMBRANE\_SIGNALING  
MORI\_PRE\_BII\_LYMPHOCYTE\_UP, MORI\_PRE\_BII\_LYMPHOCYTE\_UP  
KEGG\_NON\_SMALL\_CELL\_LUNG\_CANCER, KEGG\_NON\_SMALL\_CELL\_LUNG\_CANCER  
REACTOME\_OVARIAN\_TUMOR\_DOMAIN\_PROTEASES, REACTOME\_OVARIAN\_TUMOR\_DOMAIN\_PROTEASES  
REACTOME\_HDR\_THROUGH\_HOMOLOGOUS\_RECOMBINATION\_HRR, REACTOME\_HDR\_THROUGH\_HOMOLOGOUS\_RECOMBINATION\_HRR  
CHEMNITZ\_RESPONSE\_TO\_PROSTAGLANDIN\_E2\_UP, CHEMNITZ\_RESPONSE\_TO\_PROSTAGLANDIN\_E2\_UP  
REACTOME\_SENESCENCE\_ASSOCIATED\_SECRETORY\_PHENOTYPE\_SASP, REACTOME\_SENESCENCE\_ASSOCIATED\_SECRETORY\_PHENOTYPE\_SASP  
LE\_EGR2\_TARGETS\_UP, LE\_EGR2\_TARGETS\_UP  
REACTOME\_PROGRAMMED\_CELL\_DEATH, REACTOME\_PROGRAMMED\_CELL\_DEATH  
KEGG\_BASE\_EXCISION\_REPAIR, KEGG\_BASE\_EXCISION\_REPAIR  
KEGG\_PROGESTERONE\_MEDIATED\_OOCYTE\_MATURATION, KEGG\_PROGESTERONE\_MEDIATED\_OOCYTE\_MATURATION  
REACTOME\_DISORDERS\_OF\_TRANSMEMBRANE\_TRANSPORTERS, REACTOME\_DISORDERS\_OF\_TRANSMEMBRANE\_TRANSPORTERS  
NOUZOVA\_TRETINOIN\_AND\_H4\_ACETYLTATION, NOUZOVA\_TRETINOIN\_AND\_H4\_ACETYLTATION  
REACTOME\_SIGNALING\_BY\_HEDGEHOG, REACTOME\_SIGNALING\_BY\_HEDGEHOG  
REACTOME\_BUDDING\_AND\_MATURATION\_OF\_HIV\_VIRION, REACTOME\_BUDDING\_AND\_MATURATION\_OF\_HIV\_VIRION  
REACTOME\_ASSEMBLY\_OF\_THE\_HIV\_VIRION, REACTOME\_ASSEMBLY\_OF\_THE\_HIV\_VIRION  
ISHIDA\_E2F\_TARGETS, ISHIDA\_E2F\_TARGETS  
REACTOME\_TCR\_SIGNALING, REACTOME\_TCR\_SIGNALING  
BIOCARTA\_PTC1\_PATHWAY, BIOCARTA\_PTC1\_PATHWAY  
REACTOME\_PCNA\_DEPENDENT\_LONG\_PATCH\_BASE\_EXCISION\_REPAIR, REACTOME\_PCNA\_DEPENDENT\_LONG\_PATCH\_BASE\_EXCISION\_REPAIR  
PID\_BETA\_CATENIN\_DEG\_PATHWAY, PID\_BETA\_CATENIN\_DEG\_PATHWAY  
REACTOME\_POLO LIKE\_KINASE\_MEDIATED\_EVENTS, REACTOME\_POLO LIKE\_KINASE\_MEDIATED\_EVENTS  
REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_RESPONSE, REACTOME\_DNA\_DOUBLE\_STRAND\_BREAK\_RESPONSE  
OUELLET\_CULTURED\_OVARIAN\_CANCER\_INVASIVE\_VS\_LMP\_UP, OUELLET\_CULTURED\_OVARIAN\_CANCER\_INVASIVE\_VS\_LMP\_UP  
SHAFFER\_IRF4\_TARGETS\_IN\_ACTIVATED\_DENDRITIC\_CELL, SHAFFER\_IRF4\_TARGETS\_IN\_ACTIVATED\_DENDRITIC\_CELL  
REACTOME\_MAPK6\_MAPK4\_SIGNALING, REACTOME\_MAPK6\_MAPK4\_SIGNALING  
REACTOME\_LATE\_ENDOSOMAL\_MICROAUTOPHAGY, REACTOME\_LATE\_ENDOSOMAL\_MICROAUTOPHAGY  
REACTOME\_PTEN\_REGULATION, REACTOME\_PTEN\_REGULATION  
BIOCARTA\_PTEN\_PATHWAY, BIOCARTA\_PTEN\_PATHWAY  
REACTOME\_G0\_AND\_EARLY\_G1, REACTOME\_G0\_AND\_EARLY\_G1  
REACTOME\_GAP\_FILLING\_DNA\_REPAIR\_SYNTHESIS\_AND\_LIGATION\_IN\_GG\_NER, REACTOME\_GAP\_FILLING\_DNA\_REPAIR\_SYNTHESIS\_AND\_LIGATION\_IN\_GG\_NER  
REACTOME\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES, REACTOME\_SYNTHESIS\_OF\_ACTIVE\_UBIQUITIN\_ROLES\_OF\_E1\_AND\_E2\_ENZYMES  
ZHU\_CMV\_24\_HR\_UP, ZHU\_CMV\_24\_HR\_UP  
KEGG\_OOCYTE\_MEIOSIS, KEGG\_OOCYTE\_MEIOSIS  
ABRAMSON\_INTERACT\_WITH\_AIRE, ABRAMSON\_INTERACT\_WITH\_AIRE