Reactome Pathway Analysis for PD1vsCTL activated suppressed Generation of second messenger molecules PD-1 signaling Translocation of ZAP-70 to Immunological synapse Amplification of signal from the Amplification of เป็นสายเกิด unattached kinetochores via a MAD2 inhibitory signal FCGR activation Mitotic Spindle Checkpoint Resolution of Sister Chromatid Cohesion EML4 and NUDC in mitotic spindle formation Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell **RHO GTPases Activate Formins** GeneRatio Mitotic Prometaphase 0.2 Separation of Sister Chromatids 0.4 0.6 Mitotic Anaphase 0.8 Mitotic Metaphase and Anaphase FCERI mediated Ca+2 mobilization pvalue 5e-05 Cell Cycle, Mitotic 4e-05 3e-05 M Phase 2e-05 1e-05 Role of phospholipids in phagocytosis GPVI-mediated activation cascade Metabolism of RNA DAP12 signaling Formation of the cornified envelope Costimulation by the CD28 family DAP12 interactions GPCR ligand binding Cytokine Signaling in Immune system Class A/1 (Rhodopsin-like receptors) Fcgamma receptor (FCGR) dependent phagocytosis Keratinization 0.2 0.2 0.4 0.6 8.0 0.4 0.6 8.0

GeneRatio

Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell Gap-filling DNA repair synthesis and ligation in TC-NER Interleukin-2 family signaling Nucleotide Excision Repair **DNA** Repair Interleukin-3, Interleukin-5 and GM-CSF signaling mRNA Splicing GPVI-mediated activation cascade mRNA Splicing - Major Pathway DAP12 signaling Synthesis of PA FCGR activation Metabolism of RNA Regulation of actin dynamics for phagocytic cup formation FCERI mediated Ca+2 mobilization Processing of Capped Intron-Containing Pre-mRNA Role of phospholipids in phagocytosis DAP12 interactions Fcgamma receptor (FCGR) dependent phagocytosis Transport of Mature mRNA derived from an Intron–Containing Transcript Transport of Mature Transcript to Cytoplasm number of genes CD22 mediated BCR regulation O 50 Generation of second messenger molecules Nuclear Pore Complex (NPC) Disassembly 100 150 Metabolism of non-coding RNA snRNP Assembly 200 PD-1 signaling Costimulation by the CD28 family Translocation of ZAP-70 to Immunological synapse pvalue Apoptotic cleavage of cell adhesion proteins Cilium Assembly 6e - 04Organelle biogenesis and maintenance Nuclear Envelope (NE) Reassembly Phosphorylation of CD3 and TCR zeta chains 4e - 04Cytokine Signaling in Immune system 2e-04 AURKA Activation by TPX2 Mitotic G2_G2/M phases Classical antibody-mediated complement activation Mitotic Anaphase Mitotic Prometaphase GPCR ligand binding Resolution of Sister Chromatid Cohesion Mitotic Metaphase and Anaphase EML4 and NUDC in mitotic spindle formation M Phase RHO GTPases Activate Formins Formation of the cornified envelope Separation of Sister Chromatids Class A/1 (Rhodopsin-like receptors) Amplification of signal from unattached kinetochores via a MAD2 inhibit@pls@yrde, Mitotic Amplification of signal from the kinetochores Mitotic Spindle Checkpoint Keratinization Cell Cycle Checkpoints Chemokine receptors bind chemokines **Developmental Biology DNA Replication** Elevation of cytosolic Ca2+ levels

Activation of ATR in response to replication stress

Pcnt Dbf4 Psmc6/Gins4 Ska1 Nedd Anapc1/Lig1 Ppp2r5a Ndc80 Ercc6l mc1ankQccMcph1 Psmb7 Prkar2b Cdc@er@enpf Cdk7 Mcm1(Psmc4 Nup85 Rcc2up160 Plcdc14a Ptk6 Cdk2 Kif23 Nup37Tubb6 Aurkb Cen Cdca5 H2axsmatGmnn Cep192 Gorasp2pp2r1b Mad2i1 CsnkMcm2 Dna2 Blzf1 Cep72 Gins1 Zw10 en Ccnb2p2 Esco2apk1 Pold4 Psme3 Ska2pp1cH2az Cdc72dkn1cPole3 Ppp2r2a Psma3 NekWee1 Tpx2 Nupl2 Ncaph2E2f5 Tuba1c Bub1TaokH2atAurka Cdc6 Ajuba Tubgcp6 Clasp Spc25
Ranbp2 Gins3:ap Conh
Zwilch Wapl Kif18aenpc1 Kif20ain B3 Conh
Cenpu Tubb 45 Conh Cenpq Cenpu Tubb4b Sgo2a Sgo1 Kif20a in Psmd6cnh Ndc1 pu Tubb4b Sgo2a Cep57 SpasCdc45smd8
Bub3 Tubb4a Tubb2b Psmd12 Nup88 Cul1 Cdk1 Itgb3bjHausRcc1 Pcna Rab2a size Nup107 Nuf2lcarPsmd7iarCdc25Psmd1 Pkp1 50 Bub @dc20 Cdk6 Lbr Ankle2 Hmmr Stfa3 100 Tuba8Mapre@cp11Din54Orc:Lmnb1>sma4 Krt20 150 Pds5b Ppp2 Cenpa ep Mcm8kpnb1\napc5 Orc2 Spdl1 Seh1 TublRfc2Orc4Pold2Lpin1 Cdt1 200 Cdsn Cenpo Cepé Haus Nup 50 se 1 Tubgcp5 / Mcm3 Vrk1 Cdc16 Prim2 Krt77 fold change Tubgcp5 / Spink5 Ncaph Ofd1 Rfc3 Rfc4 Mastl Krt1 0 Krt5 Ppl Krt34 -2 Frination of the cornified envelope category Cell Cycle, Mitotic Krt14 Formation of the cornified envelope Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell Krt2 Mitotic Prometaphase Dsc1 Resolution of Sister Chromatid Cohesion Krt80 Dsc3 Krt15 Krt86 Dsg1a Krt16 Krt79 Ifitm2 Klk13 Cd3e Cd34 ltgb7 ltgb2lcam1 Cd40 Siglece H2-M5 Cd300lb Ifitm3 Slamf6 Gm8909 Siglec1 lfitm1 Treml4 Col1a2 Cd8a H2=Q1-Npdc1 Hcst-Cd3d Cd3q Gm11127 Icam2 Lair1 Gm7030 Icam4 Trem1 Col1a1H2-T23 Cd300c2 Cd8b1 Kir3dl2 Itgal Pianp H2-M2 C3

H2+Q4 Pilra

Klrk1

Cd22 Slam 7 H2 Q4 Pilra Siglect

Cd300e

H2-M3

Cd247