

| NAME                                                                      | SIZE | ES          | NES        | NOM p-val   | FDR q-val   | FWER p-val | RANK AT MAX | LEADING EDGE                    |
|---------------------------------------------------------------------------|------|-------------|------------|-------------|-------------|------------|-------------|---------------------------------|
| REACTOME_RNA_POL_I_PROMOTER_OPENING                                       | 47   | 0.8114803   | 2.1871815  | 0           | 0           | 0          | 988         | tags=38%, list=5%, signal=40%   |
| REACTOME_PACKAGING_OF_TELOMERE_ENDS                                       | 39   | 0.81921226  | 2.1465638  | 0           | 0           | 0          | 1290        | tags=44%, list=6%, signal=46%   |
| REACTOME_DEPOSITION_OF_NEW_CENPA_CONTAINING_NUCLEOSOMES_AT_THE_CENTROMERE | 50   | 0.7841518   | 2.1417966  | 0           | 0           | 0          | 2092        | tags=52%, list=10%, signal=58%  |
| REACTOME_MEIOTIC_SYNAPSIS                                                 | 60   | 0.7404236   | 2.068315   | 0           | 0           | 0          | 1290        | tags=33%, list=6%, signal=35%   |
| REACTOME_TELOMERE_MAINTENANCE                                             | 62   | 0.71815425  | 2.0262043  | 0           | 1.93E-04    | 0.001      | 2099        | tags=40%, list=10%, signal=45%  |
| REACTOME_CHROMOSOME_MAINTENANCE                                           | 100  | 0.67798203  | 2.0219612  | 0           | 1.61E-04    | 0.001      | 2099        | tags=38%, list=10%, signal=42%  |
| REACTOME_MEIOTIC_RECOMBINATION                                            | 70   | 0.7068457   | 1.9992437  | 0           | 1.38E-04    | 0.001      | 2792        | tags=37%, list=14%, signal=43%  |
| REACTOME_MEIOSIS                                                          | 96   | 0.6751805   | 1.998243   | 0           | 1.21E-04    | 0.001      | 2792        | tags=34%, list=14%, signal=40%  |
| REACTOME_RNA_POL_I_TRANSCRIPTION                                          | 70   | 0.6914593   | 1.968253   | 0           | 3.16E-04    | 0.003      | 1571        | tags=30%, list=8%, signal=32%   |
| REACTOME_CELL_CYCLE                                                       | 345  | 0.60343045  | 1.9443841  | 0           | 3.80E-04    | 0.004      | 4863        | tags=51%, list=24%, signal=66%  |
| REACTOME_DNA_REPLICATION                                                  | 166  | 0.6271394   | 1.936099   | 0           | 3.46E-04    | 0.004      | 5666        | tags=64%, list=27%, signal=88%  |
| REACTOME_MITOTIC_M_M_G1_PHASES                                            | 147  | 0.6298976   | 1.9259815  | 0           | 4.75E-04    | 0.006      | 5648        | tags=65%, list=27%, signal=88%  |
| REACTOME_AMYLOIDS                                                         | 66   | 0.67019045  | 1.8850827  | 0           | 0.001018795 | 0.014      | 988         | tags=27%, list=5%, signal=29%   |
| REACTOME_G2_M_CHECKPOINTS                                                 | 32   | 0.739597    | 1.8681419  | 0.001234568 | 0.001420209 | 0.021      | 3362        | tags=66%, list=16%, signal=78%  |
| REACTOME_CELL_CYCLE_CHECKPOINTS                                           | 100  | 0.62692964  | 1.8639838  | 0           | 0.001452816 | 0.023      | 4453        | tags=56%, list=22%, signal=71%  |
| REACTOME_CELL_CYCLE_MITOTIC                                               | 271  | 0.58339554  | 1.8549417  | 0           | 0.001423541 | 0.024      | 4863        | tags=52%, list=24%, signal=67%  |
| REACTOME_MITOTIC_PROMETAPHASE                                             | 74   | 0.6412991   | 1.8528863  | 0           | 0.001339803 | 0.024      | 5169        | tags=57%, list=25%, signal=75%  |
| REACTOME_S_PHASE                                                          | 95   | 0.62072074  | 1.8350911  | 0           | 0.001789641 | 0.034      | 5775        | tags=68%, list=28%, signal=95%  |
| REACTOME_G1_S_TRANSITION                                                  | 94   | 0.61842316  | 1.8207523  | 0           | 0.00214606  | 0.041      | 5648        | tags=65%, list=27%, signal=89%  |
| REACTOME_REGULATION_OF_MITOTIC_CELL_CYCLE                                 | 73   | 0.62734926  | 1.8110863  | 0           | 0.002565568 | 0.05       | 5775        | tags=68%, list=28%, signal=95%  |
| REACTOME_TRANSCRIPTION                                                    | 178  | 0.5734964   | 1.8053831  | 0           | 0.002624965 | 0.054      | 5941        | tags=54%, list=29%, signal=76%  |
| REACTOME_ACTIVATION_OF_ATR_IN_RESPONSE_TO_REPLICATION_STRESS              | 27   | 0.73008776  | 1.7971648  | 0           | 0.00306404  | 0.067      | 3362        | tags=67%, list=16%, signal=80%  |
| REACTOME_ASSEMBLY_OF_THE_PRE_REPLICATIVE_COMPLEX                          | 56   | 0.6375512   | 1.7810187  | 0           | 0.00371228  | 0.085      | 5775        | tags=75%, list=28%, signal=104% |
| REACTOME_GRB2_EVENTS_IN_ERBB2_SIGNALING                                   | 21   | 0.7517525   | 1.7784184  | 0.001278772 | 0.003795798 | 0.091      | 1330        | tags=38%, list=6%, signal=41%   |
| REACTOME_SYNTHESIS_OF_DNA                                                 | 80   | 0.6211803   | 1.7765441  | 0           | 0.003943081 | 0.099      | 5775        | tags=70%, list=28%, signal=97%  |
| REACTOME_M_G1_TRANSITION                                                  | 69   | 0.62019247  | 1.7710038  | 0           | 0.004156463 | 0.107      | 5775        | tags=71%, list=28%, signal=98%  |
| REACTOME_ORC1_REMOVAL_FROM_CHROMATIN                                      | 58   | 0.63258404  | 1.766709   | 0.001154734 | 0.004561747 | 0.122      | 5775        | tags=72%, list=28%, signal=100% |
| REACTOME_HIV_INFECTION                                                    | 189  | 0.56319004  | 1.758982   | 0           | 0.004975662 | 0.138      | 5981        | tags=57%, list=29%, signal=80%  |
| REACTOME_MITOTIC_G1_G1_S_PHASES                                           | 115  | 0.58119786  | 1.7585679  | 0           | 0.004869551 | 0.14       | 4463        | tags=51%, list=22%, signal=65%  |
| REACTOME_TRANSCRIPTIONAL_REGULATION_OF_WHITE_ADIPOCYTE_DIFFERENTIATION    | 53   | -0.66070986 | -2.2949464 | 0           | 0           | 0          | 693         | tags=21%, list=3%, signal=21%   |