**Suppl 3.** Details of the Gene Oncology and the Kyoto Encyclopedia of Genes and Genomes analysis.

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| --- | --- | --- | --- | --- |
| **Term** | **Category** | **Count** | **P-value** | **Enrichment score** |
| GO:0006913: nucleocytoplasmic transport | BP | 4 | <0.01 | 37.57 |
| GO:0030071: regulation of mitotic metaphase/anaphase transition | BP | 3 | <0.01 | 41.48 |
| GO:0006281: DNA repair | BP | 5 | <0.01 | 8.38 |
| GO:1902459: positive regulation of stem cell population maintenance | BP | 3 | <0.01 | 31.77 |
| GO:0006404: RNA import into nucleus | BP | 2 | <0.01 | 331.86 |
| GO:0005654: nucleoplasm | CC | 24 | <0.01 | 3.07 |
| GO:0000776: kinetochore | CC | 5 | <0.01 | 16.01 |
| GO:0005635: nuclear envelope | CC | 5 | <0.01 | 12.70 |
| GO:0005643: nuclear pore | CC | 4 | <0.01 | 21.94 |
| GO:0005634: nucleus | CC | 22 | <0.01 | 1.88 |
| GO:0005515: protein binding | MF | 37 | <0.01 | 1.39 |
| GO:0003682: chromatin binding | MF | 7 | <0.01 | 7.07 |
| GO:0017056: structural constituent of nuclear pore | MF | 3 | <0.01 | 49.00 |
| GO:0003712: transcription cofactor activity | MF | 4 | <0.01 | 13.34 |
| GO:0003677: DNA binding | MF | 9 | <0.01 | 3.00 |
| hsa03013: Nucleocytoplasmic transport | KEGG | 5 | <0.01 | 16.33 |

BP: biological process; CC: cellular component; MF: molecular function.