**Table S3 The values of , , , and on the benchmark datasets for 8 species**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Species** | **GO aspect** |  |  |  |  |
| Human | MF | 5 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 10 | 1000 | 0.01 | 0.95 |
| Mouse | MF | 5 | 1000 | 0.01 | 0.90 |
| BP | 3 | 1000 | 0.01 | 0.90 |
| CC | 2 | 1000 | 0.01 | 0.95 |
| Arabidopsis | MF | 5 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 5 | 1000 | 0.01 | 0.95 |
| Rat | MF | 3 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 5 | 1000 | 0.01 | 0.95 |
| Fly | MF | 3 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 5 | 1000 | 0.01 | 0.95 |
| Budding  Yeast | MF | 3 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 5 | 1000 | 0.01 | 0.95 |
| Fission Yeast | MF | 3 | - | 0.01 | 0.90 |
| BP | 5 | - | 0.01 | 0.90 |
| CC | 5 | - | 0.01 | 0.95 |
| Nematoda | MF | 5 | 1000 | 0.01 | 0.90 |
| BP | 5 | 1000 | 0.01 | 0.90 |
| CC | 5 | 1000 | 0.01 | 0.95 |

*Note:* ‘-’ means that the PCA is not executed in the corresponding species.