**Table S4 Type 1 error of the MCP test with different mutation rate**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Significance level |  θ = 50 | θ= 100 | θ= 200 | θ= 400 |
| 0.05 | 0.064 | 0.054 | 0.057 | 0.043 |
| 0.01 | 0.018 | 0.010 | 0.012 | 0.008 |
| Significance level |  θ = 600 | θ= 800 | θ= 1000 |  |
| 0.05 | 0.042 | 0.042 | 0.061 |  |
| 0.01 | 0.006 | 0.004 | 0.010 |  |