

**Table S4: Chromosome distribution of Down in Deficient DEGs**

| Chromosome | Total Genes | Observed  | Expected     | Chi <sup>2</sup> | p-value           |
|------------|-------------|-----------|--------------|------------------|-------------------|
| 1          | 1439        | 32        | 32.41        | 0.006            | 0.9406            |
| 2          | 1630        | 35        | 36.71        | 0.086            | 0.7694            |
| 3          | 1178        | 21        | 26.53        | 1.217            | 0.2699            |
| 4          | 1290        | 28        | 29.05        | 0.04             | 0.8409            |
| <b>5</b>   | <b>1499</b> | <b>20</b> | <b>33.76</b> | <b>6.014</b>     | <b>0.0142</b>     |
| 6          | 1145        | 17        | 25.79        | 3.158            | 0.0755            |
| 7          | 1750        | 33        | 39.42        | 1.135            | 0.2867            |
| 8          | 1116        | 25        | 25.14        | 0.001            | 0.9771            |
| 9          | 1281        | 34        | 28.85        | 0.975            | 0.3233            |
| 10         | 1039        | 27        | 23.40        | 0.581            | 0.4459            |
| 11         | 1592        | 38        | 35.86        | 0.138            | 0.7107            |
| 12         | 901         | 21        | 20.29        | 0.026            | 0.8722            |
| 13         | 940         | 26        | 21.17        | 1.156            | 0.2823            |
| 14         | 764         | 16        | 17.21        | 0.088            | 0.7666            |
| 15         | 825         | 23        | 18.58        | 1.092            | 0.296             |
| 16         | 655         | 11        | 14.75        | 0.982            | 0.3216            |
| 17         | 1056        | 21        | 23.78        | 0.341            | 0.5591            |
| 18         | 571         | 15        | 12.86        | 0.365            | 0.5455            |
| 19         | 673         | 17        | 15.16        | 0.23             | 0.6313            |
| <b>X</b>   | <b>900</b>  | <b>41</b> | <b>20.27</b> | <b>22.094</b>    | <b>&lt;0.0001</b> |