

Table S2. Species annotation and taxonomic analysis of cecal contents of Korean quail (phylum level).

| Items | Groups | | | <i>p</i> -value |
|---------------------------|------------|------------|------------|-----------------|
| | C | T1 | T2 | |
| <i>Bacteroidetes</i> | 46.62±4.35 | 53.29±5.96 | 36.16±4.17 | 0.118 |
| <i>Firmicutes</i> | 40.63±2.83 | 33.71±6.23 | 39.19±2.57 | 0.513 |
| <i>Actinobacteria</i> | 3.42±1.42 | 5.90±2.55 | 16.23±6.99 | 0.170 |
| <i>Proteobacteria</i> | 2.78±0.46 | 4.19±1.27 | 2.54±0.46 | 0.372 |
| <i>Fusobacteria</i> | 4.60±3.99 | 0.42±0.17 | 4.17±3.92 | 0.533 |
| <i>Deferribacteres</i> | 0.98±0.72 | 0.79±0.40 | 0.82±0.43 | 0.967 |
| <i>Epsilonbacteraeota</i> | 0.36±0.24 | 1.23±0.75 | 0.29±0.08 | 0.577 |
| <i>Tenericutes</i> | 0.15±0.03 | 0.28±0.10 | 0.27±0.12 | 0.580 |
| <i>Patescibacteria</i> | 0.24±0.21 | 0.11±0.03 | 0.11±0.08 | 0.857 |
| <i>Synergistetes</i> | 0.19±0.07 | 0.01±0.01 | 0.13±0.12 | 0.212 |
| <i>Others</i> | 0.03±0.01 | 0.07±0.03 | 0.10±0.02 | 0.124 |

C: quails fed basal diets, T1: quails fed basal diet with 0.05% (w/w) *Agaricus blazei* polysaccharide, T2: quails fed basal diet with 0.1% (w/w) *Agaricus blazei* polysaccharide, Values are means ± SEM (n=3).