



Figure S1: Bacterial taxonomic compositions at the levels of phylum in the feces and the intestinal digesta

Table S1: Primers used for real-time quantitative PCR for functional analyses

| Genes | Forward primer | Reverse primer | Accession number |
|---------------|---------------------------|---------------------------|------------------|
| IL-6 | CTCCCAACAGACCTGTCTATAC | CCATTGCACAACCTCTTTTCTCA | XM_021163844.1 |
| IL-1 β | CACTACAGGCTCCGAGATGAACAAC | TGTCGTTGCTTGGTTCTCCTTGTAC | XM_006498795.5 |
| TNF- α | ATGTCTCAGCCTCTTCTCATTC | GCTTGTCACTCGAATTTTGAGA | XM_021218154.1 |
| GAPDH | CCTCGTCCCGTAGACAAAATG | TGAGGTCAATGAAGGGGTCGT | XM_029535298.1 |
| Nrf2 | CAGCCATGACTGATTTAAGCAG | CAGCTGCTTGTTTTTCGGTATTA | XM_021193142.2 |
| Keap1 | GACTGGGTCAAATACGACTGC | GAGATGACTCGGAAGGATACTG | XM_032909789.1 |
| NQO1 | GAAGACATCATTCAACTACGCC | GAGATGACTCGGAAGGATACTG | NM_008706.5 |

Table S2: Chemical composition in WEA (TOP 10)

| Formula | Material | Secondary classification |
|----------------|--|---------------------------------|
| C21H20O12 | Quercetin- -5-O- β -D- glucopyranoside | Flavonol |
| C15H12O7 | Taxifolin (Dihydroquercetin) | Dihydroflavonol |
| C28H32O14 | Acacetin-7-O- rutinoside (Buddleoside) | Flavone |
| C20H18O12 | Myricetin-3-O- arabinosidechloride* | Flavonol |
| C20H18O11 | Morin -3-O- xyloside | Flavonol |
| C21H20O12 | Isohyperoside | Flavonol |
| C15H10O8 | Quercetagetin | Flavonol |
| C22H24O9 | 3,5,6,7,8,3',4'- HeptaMethoxyflavone | Flavonol |
| C15H12O8 | Dihydromyricetin (ampelopsin) | Dihydroflavonol |
| C21H24O10 | dihydrochalcone -4'-O- glucopyranoside | Chalcone |