

Supplementary materials

Fig S1. Western blotting for detection of TLR4, IRAK4, TRAF6, IKK β , NF- κ B p65, and HMGB1 expression in HT29 cells (B). $^{\#}P < 0.05$ and $^{\#\#}P < 0.01$ vs. the control group. *n.s* represent no statistical significance.

Fig S2. Effect of Uro B on the composition of the gut microbiota in normal mice. (A) α -Diversity analysis of faecal microbiota, reflected by the Chao1 index. (B) Firmicutes/Bacteroidetes ratio. Relative abundance of Firmicutes (C) and Bacteroidetes (D) at the phylum level of each group. Relative abundance of *Helicobacter* (E), *Parasutterella* (F), *Roseburia* (G), and *Faecalibacterium* (H) at the genus level of each group. All results are described as means \pm SD ($n = 12$). *n.s* represent no statistical significance.

Fig S3. Effect of Uro B on the composition of the gut microbiota in natural aging mice. (A) α -Diversity analysis of faecal microbiota, reflected by the Chao1 index. (B) Firmicutes/Bacteroidetes ratio. Relative abundance of Firmicutes (C) and Bacteroidetes (D) at the phylum level. Relative abundance of *Helicobacter* (E), *Parasutterella* (F), *Roseburia* (G), and *Faecalibacterium* (H) at the genus level. All results are described as means \pm SD ($n = 12$). $^{\#}P < 0.05$ and $^{\#\#}P < 0.01$ vs. the control group; $^*P < 0.05$ and $^{**}P < 0.01$ vs. the 12-month-old aging group.