

## Supplementary figures

Figure S1. Body weight changes during the experimental periods

\* Significantly different among the groups at each time point at  $<0.05$ .

Figure S2. Gut microbiota in the cecum at the family level

Figure S3. The morphology of large intestines

A. Large intestine villi length and width and crypt height

B. Hematoxylin-eosin staining in the large intestines

C. Goblet cell contents in the large intestines

D. PAS staining in the large intestines

Bars and error bars represent the means  $\pm$  standard deviations (n = 10).

<sup>a,b,c</sup> Different superscript letters on the bars indicated a significant difference among the groups

by Tukey test at  $P < 0.05$ .

Fig. S1

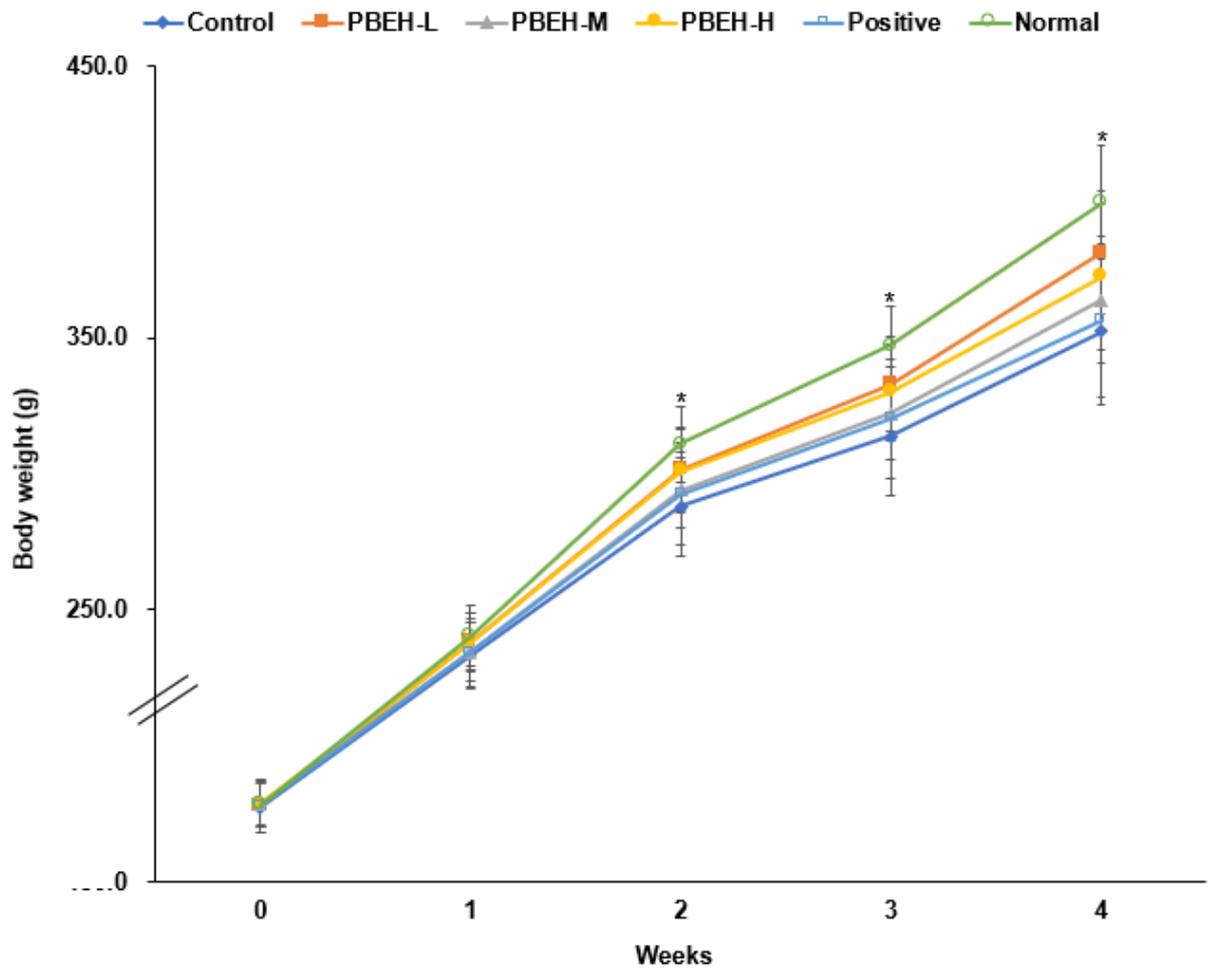


Fig. S2A

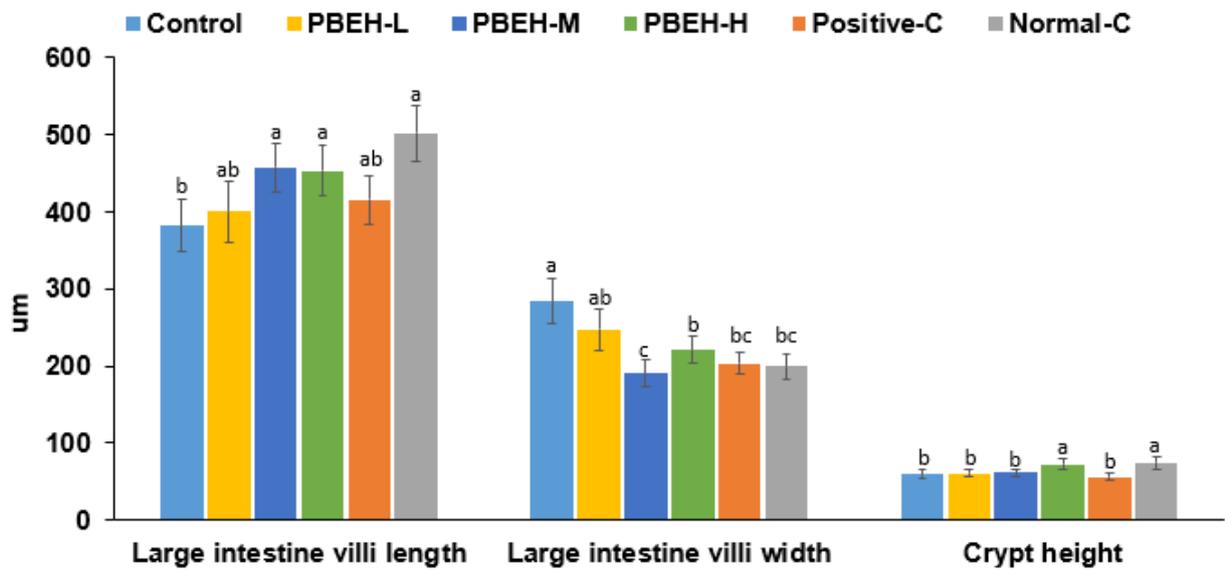


Fig. S2B

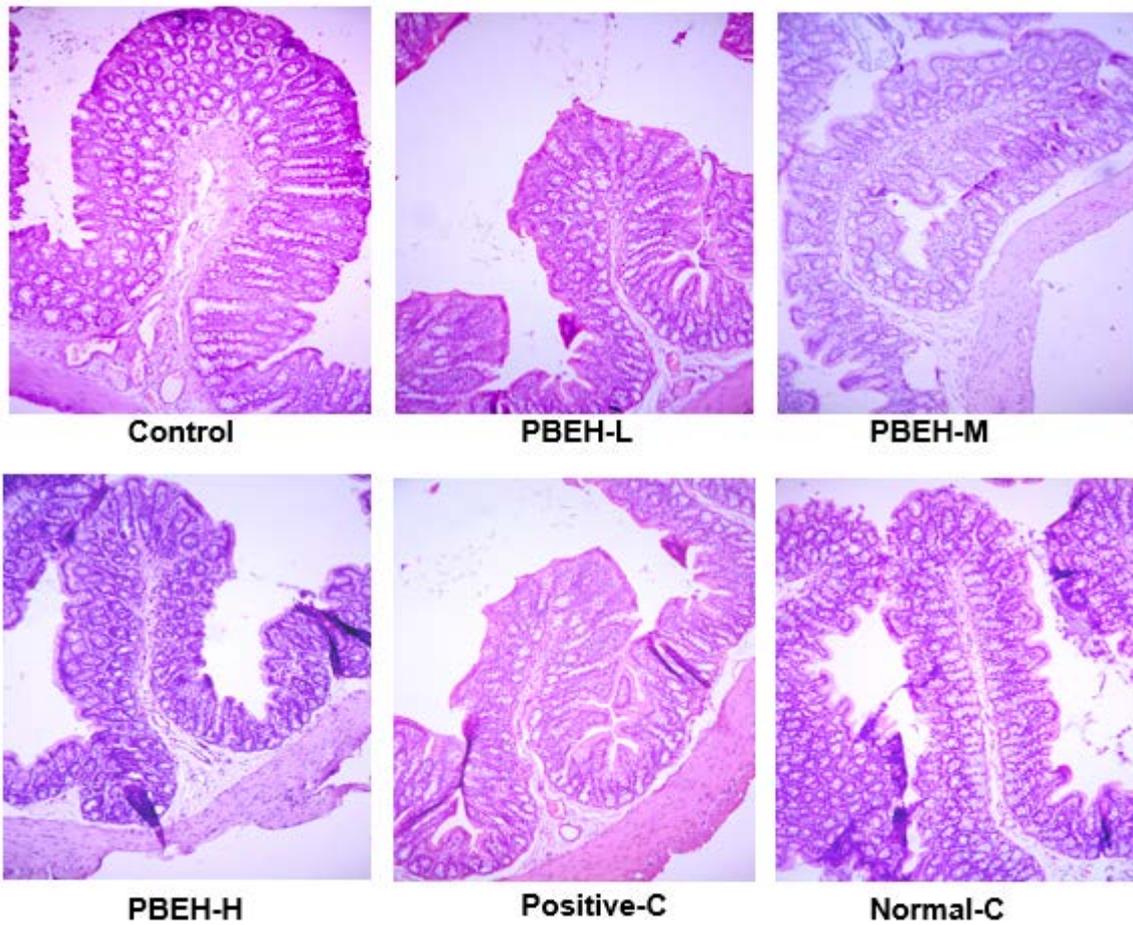


Fig. S2C

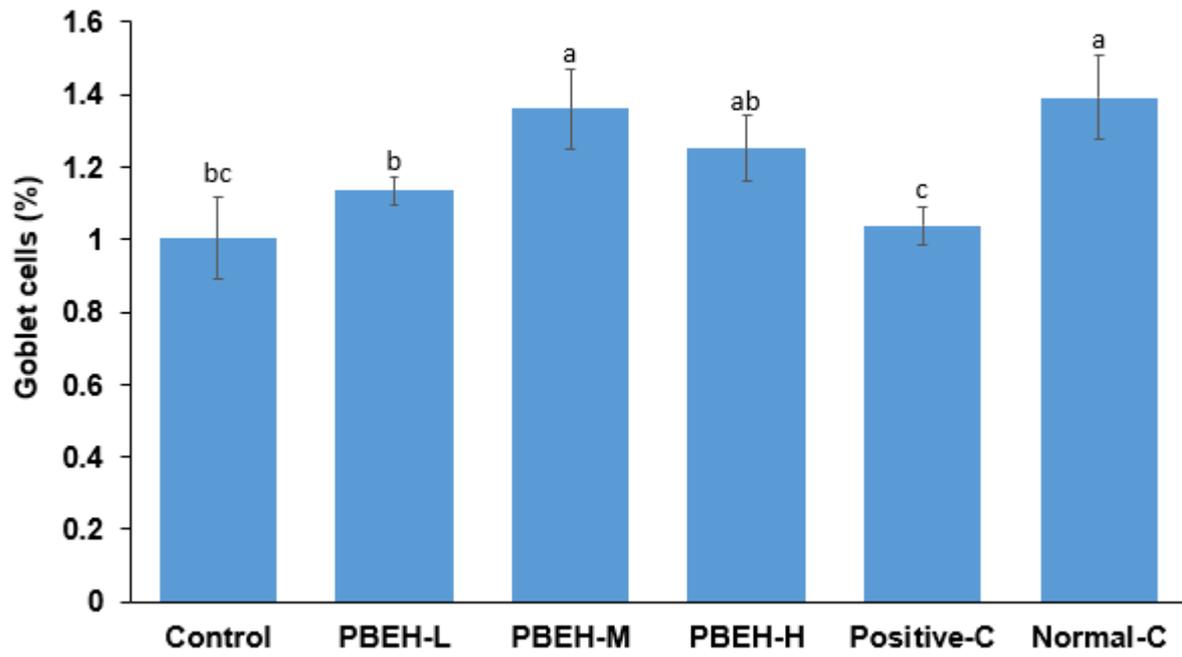


Fig. S2D

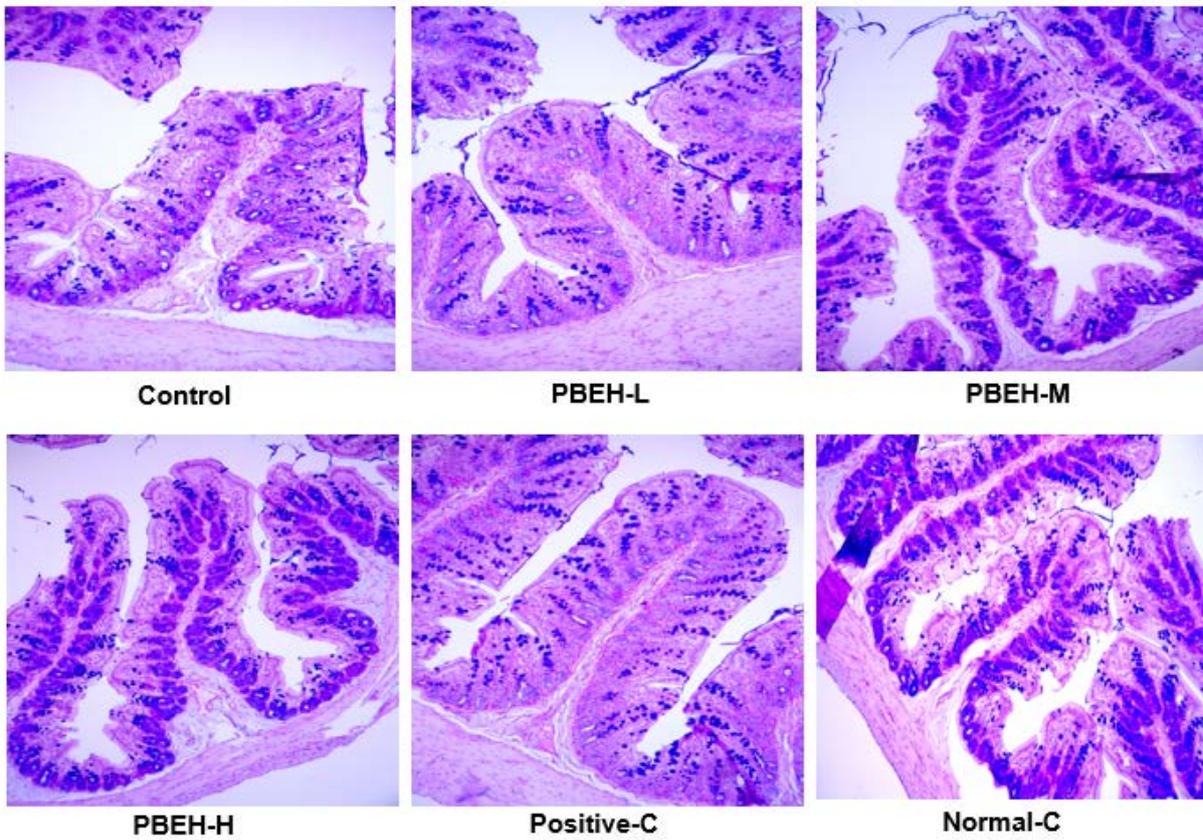


Fig. S3A

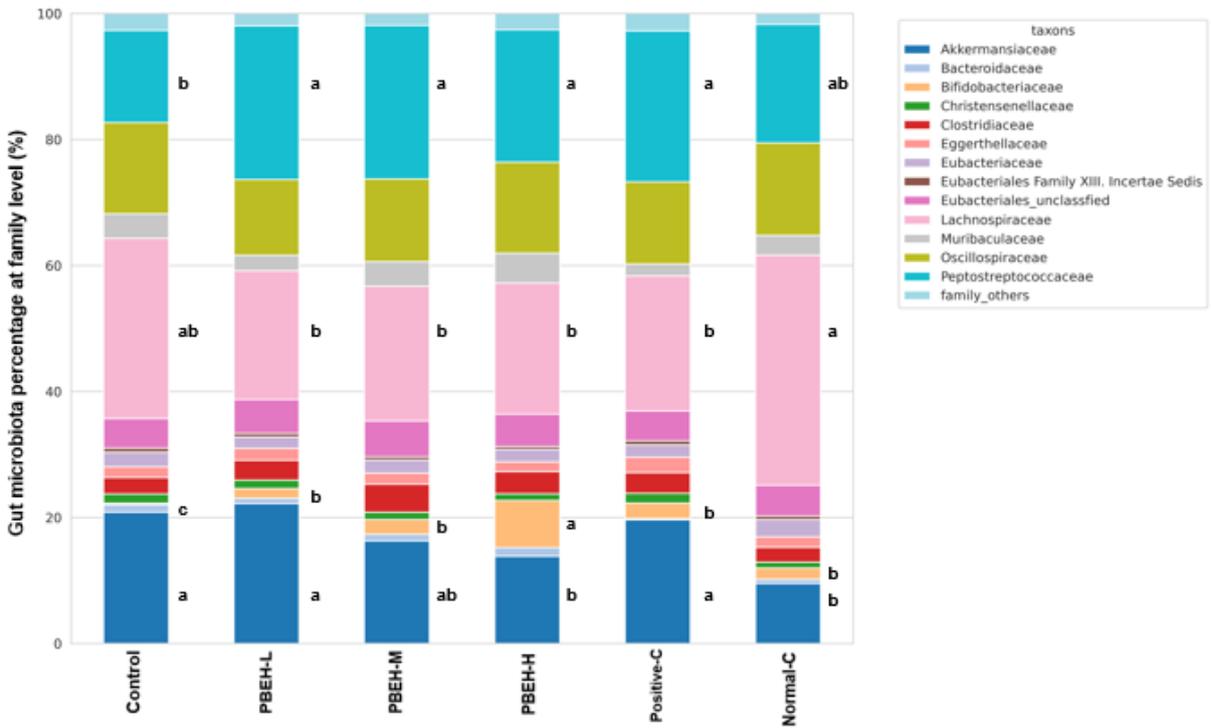
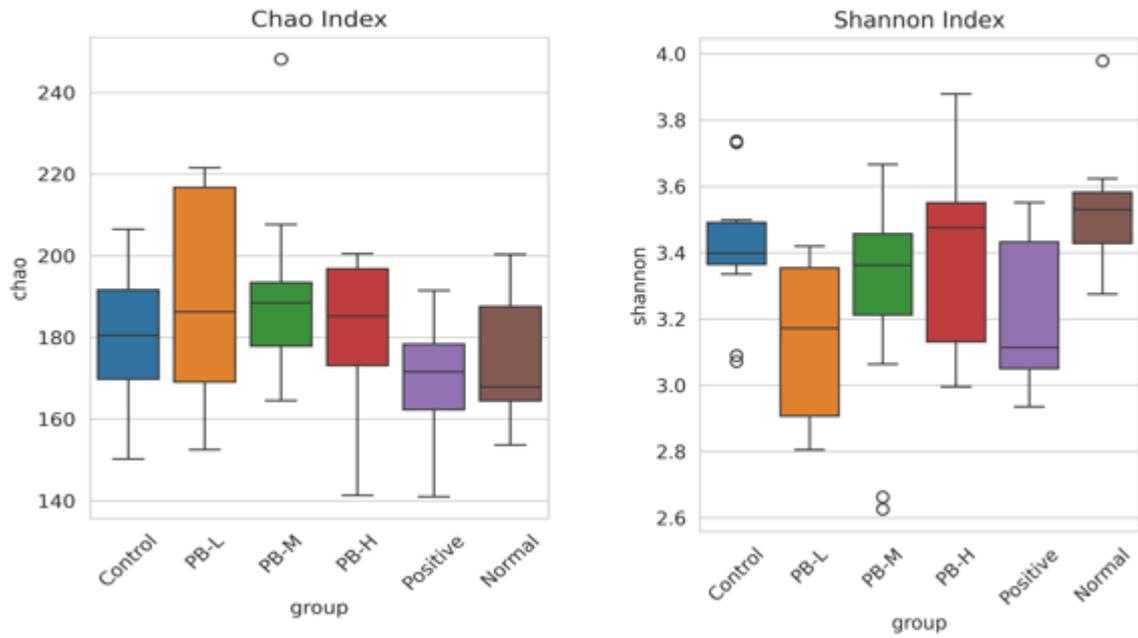


Fig. S3B



Supplementary Table S1. Amino acid composition in porcine brain enzyme hydrolysates

Amino acids	PBEH (mg/mL)	Amino acids	PBEH (mg/mL)
ARG	2.37±0.12	ALA	0.65±0.04
LUE	2.33±0.063	SER	0.56±0.02
LYS	2.15±0.09	ASP	0.49±0.02
PHE	1.64±0.03	PRO	0.47±0.03
ILU	0.86±0.02	HIS	0.46±0.03
MET	0.77±0.04	TRE	0.36±0.01
VAL	0.79±0.03	GLY	0.19±0.02
GLU	0.68±0.02		