Supplementary Material

A novel universal nano-luciferase-involved reporter system for long-term probing the food-borne probiotics and pathogenic bacteria in mice by *in-situ* bioluminescence imaging

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The Relationship Between Colony Number and Bioluminescence Intensity

Recombinant bacteria were cultured overnight, transferred to new medium to grow to log phase, and then gradient diluted with sterile phosphate-buffered saline (PBS). Each dilution was plated in MRS agar plate, supplemented with 10 μg/mL chloramphenicol, or in LB agar plate, supplemented with 200 μg/mL ampicillin for CFU counts. At the same time, bioluminescence reading of each dilution was measured using plate reader (Spark Tecan, Switzerland). The bioluminescence data were correlated with bacteria counts.

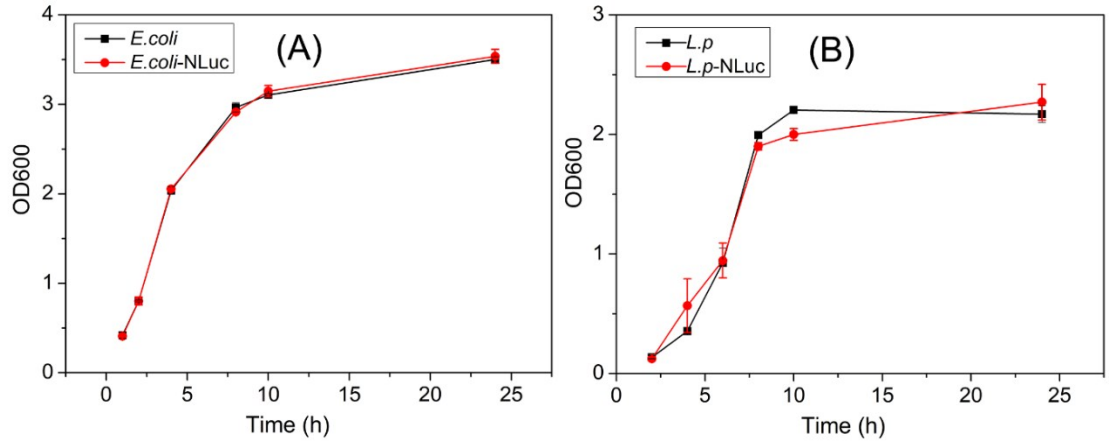

Fig. S1 Growth curve of recombinant bacteria and wild types: (A) *E. coli*-NLuc and *E. coli*. (B) *L. plantarum*-Nluc and *L. plantarum*. Data and error bars represent the mean and standard deviation of three samples at each time point.

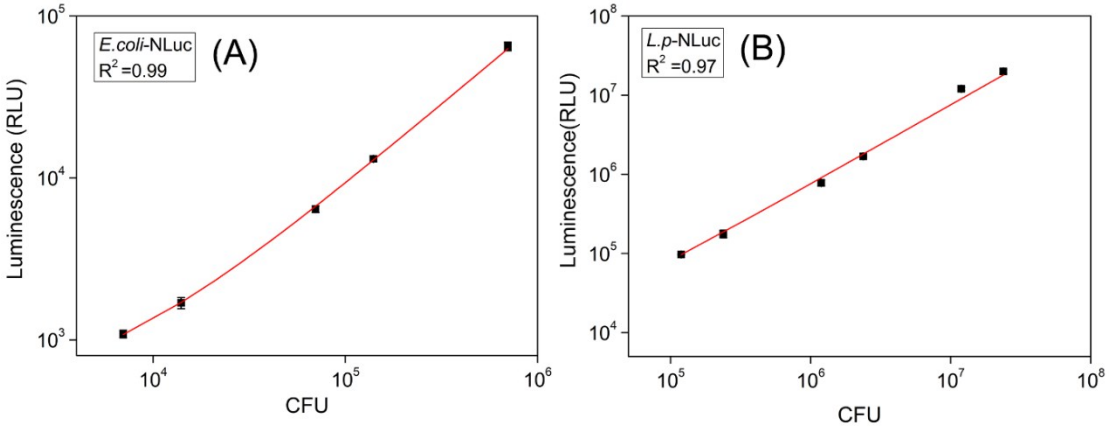

Fig. S2 Relationship between bacterial counts and the bioluminescence of (A) *E. coli*-NLuc and (B) *L. plantarum*-NLuc. Data and error bars represent the mean and standard deviation of three samples at each time point.