

Supplementary Materials

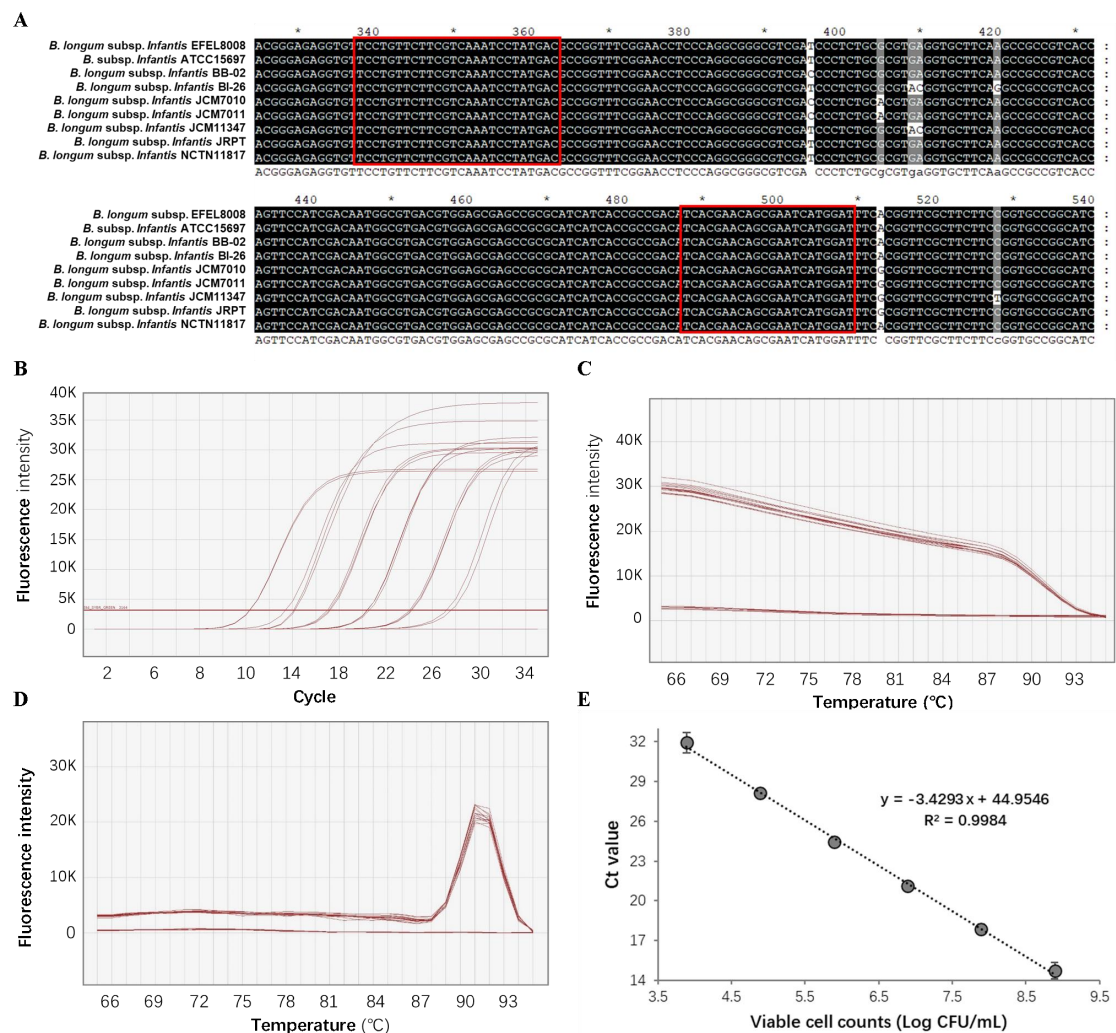
Synbiotic modulation of adult gut microbiome by 2'-fucosyllactose and *Bifidobacterium longum* subsp. *infantis* EFEL8008

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Supplementary Figure 1. Development and validation of real-time qPCR method for *Bifidobacterium longum* subsp. *infantis* detection. (A) Homologous region alignment of the sialidase gene across nine *B. infantis* strains showing sequence conservation and primer binding sites; (B) Ct curve illustrating the amplification kinetics; (C) Melting curve analysis confirming primer specificity; (D) Melting peak graph showing a single distinct peak for the target amplicon; (E) Standard curve demonstrating linearity of detection across five orders of magnitude ($R^2 = 0.9984$).