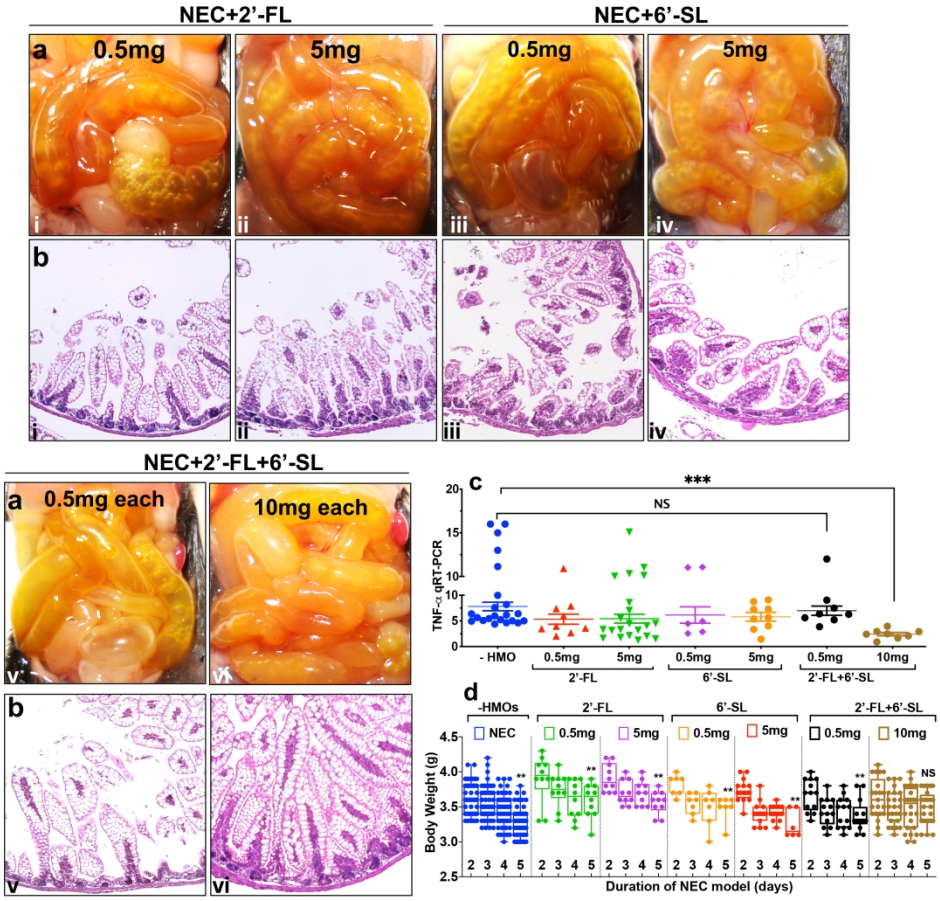
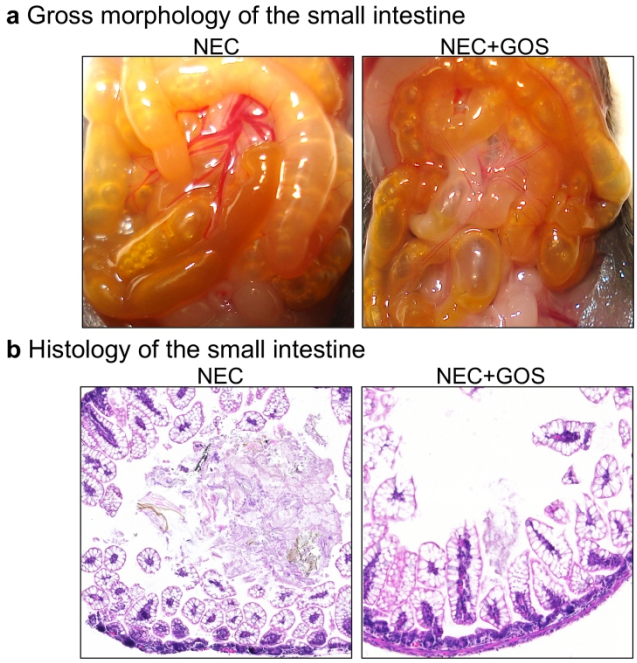
**Supplemental Fig. s1**



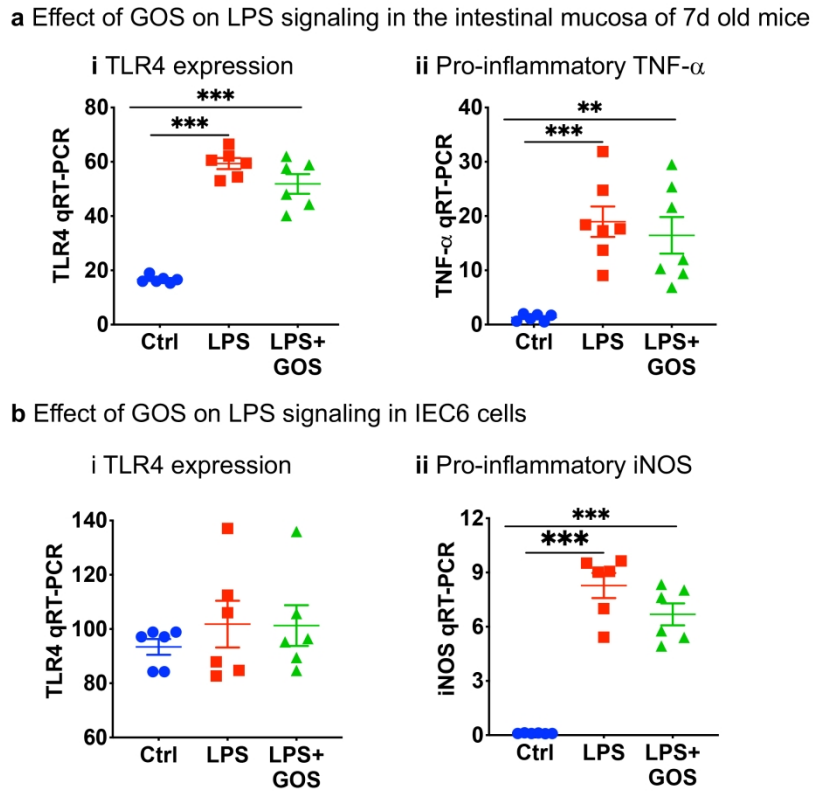

**Supplemental Fig. s1**. *Dose curve of supplementation of nutritional formula with 2'-Fucosyllactose (2'-FL) and 6'-Sialyllactose (6'-SL) in experimental model of necrotizing enterocolitis (NEC).* **ai-vi** photomicrographs showing gross morphology, **bi-vi** Hematoxylin-eosin (H&E)-stained images showing histology of small intestine (ileum), **c** qRT-PCR of pro-inflammatory cytokine TNF-a, **d** nested graph showing body weight changes, in neonatal mice subjected to experimental NEC treatments with varying doses of 2'-FL , 6'-SL, and 2'-FL+6'-SL HMO's. ***p*<0·01, *** *p*<0·001, each dot in dot-graphs represents data from an individual mouse.

**Supplemental Fig. s2.**

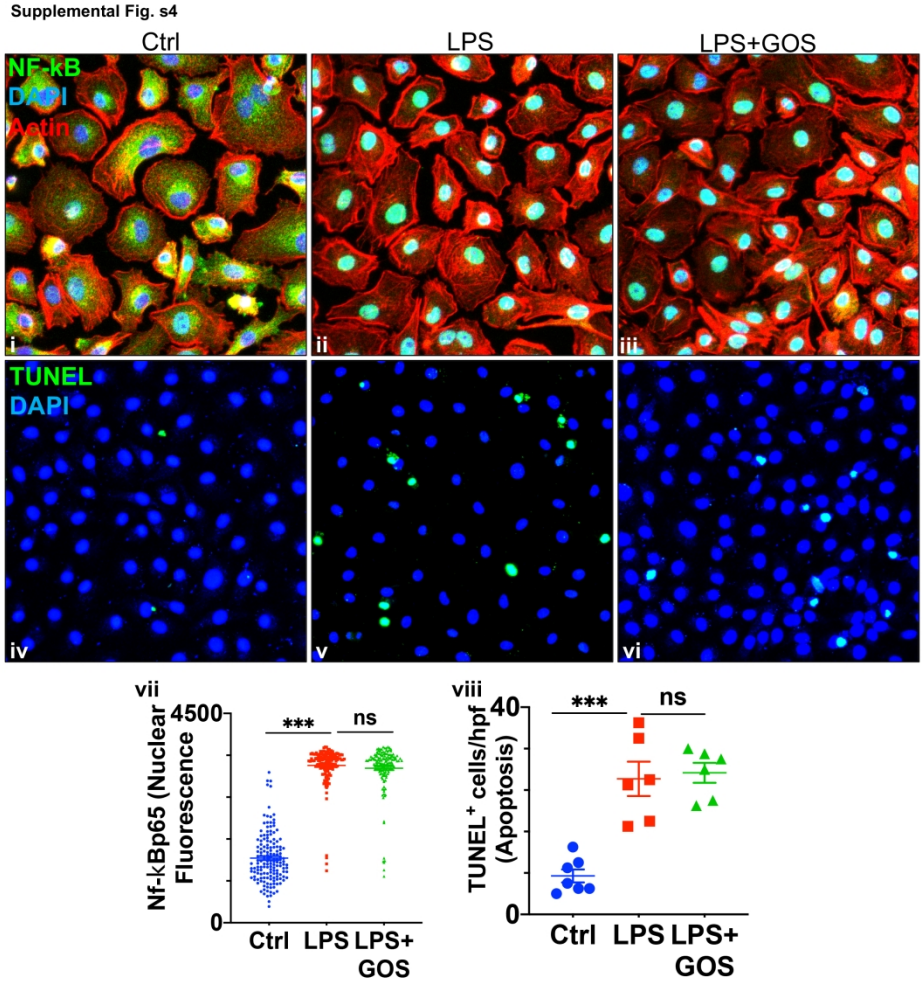



**Supplemental Fig. s2** *Galactooligosacchide (GOS) supplementation of formula does not prevent NEC in mice*. **a** Gross morphology, **b** photomicrographs of H&E sections of ileum of mice treated with GOS in infant formula.

**Supplemental Fig. s3**




**Supplemental Fig. s3** *Galactooligosacchides (GOS) does not inhibit LPS-induced TLR4 expression and signaling*. ***a*i, bi** TLR4 mRNA expression, **aii, bii** Proinflammatory cytokines tumor necrosis factor-alpha (TNF-α) and inducible nitric acid synthase (iNOS) expressions measured by qRT-PCR in mice distal intestine of 7d old mice (ileum) and IEC6 cells treated with LPS (5mg/kg, mice) (50mg/ml, IEC6 cells) and GOS (10mg/kg, mice), (10mg/ml IEC6 cells) for 6 hours. ** $P$<0·01, *** $P$<0·001. Each dot in dot-graphs represents data from each mouse or each well of cells.




**Supplemental Fig. s4** *Galacto-oligosaccharide (GOS) treatment does not prevent LPS-induced NF-kB translocation and Apoptosis in IEC6 cells.* **i-iii** photomicrographs of IEC6 cells treated with LPS (50mg/ml) alone or in combination with GOS (10mg/ml) for 45minutes and immuno-stained for NF-kB p65, **iv-vi** photomicrographs of IEC6 cells treated with LPS (50mg/ml) alone or in combination with GOS (10mg/ml) for 6 hours and immuno-stained with *in Situ* death staining kit, **vii-viii** quantification of fluorescence intensity measured using ImageJ, *** $P<0{\cdot}001$, ns=non-significant. Each dot in dot-graphs represents data from an individual cell.