

INTESTINE-SPECIFIC DELETION OF TNK1 KINASE AMELIORATES COLITIS BY MODULATING MICROBIOTA COMPOSITION

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Intestinal knockout of TNK1 kinase in mice alters mucosa-associated microbiota composition, preserves microbial diversity, and shows therapeutic potential when transplanted to colitis models.

KEY POINTS

- Intestine-specific Tnk1 knockout mice showed preserved microbial diversity and increased abundance of beneficial butyrate-producing bacterial phyla in response to colitis.
- Microbiota transplantation from Tnk1 knockout mice to germ-free wild-type recipients demonstrated beneficial therapeutic potential in a dextran sodium sulfate colitis model.
- TNK1 appears to direct microbiota composition changes via regulation of antimicrobial peptide expression in intestinal epithelium.
- Stool from Tnk1 knockout mice showed an increased number of microbial extracellular vesicles compared to wild-type mice.
- This murine study may interest researchers investigating host-microbiota interactions, intestinal barrier function, and microbial therapeutics in inflammatory bowel conditions.

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