



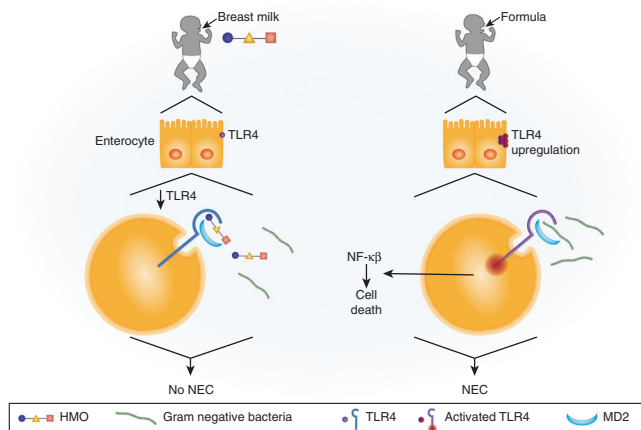
## IMAGE

# Insights image for “The human milk oligosaccharides 2’-fucosyllactose and 6’-sialyllactose protect against the development of necrotizing enterocolitis by inhibiting toll-like receptor 4 signaling.”

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The human milk oligosaccharides (HMO) present in breast milk block the binding of Gram-negative bacteria to the complex of TLR4 and MD2 by competitive inhibition, thus blocking the activation of TLR4 and preventing NEC. Formula does not contain HMO. Thus Gram-negative bacteria can bind to the TLR4-MD2 complex, (1) activating NF- $\kappa$ B that leads to cell death, and (2) increases the expression of TLR4 in the cell membrane.<sup>1</sup>



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## ADDITIONAL INFORMATION

**Competing interests:** The authors declare no competing interests.

**Statement of consent:** Samples were obtained de-identified under IRB 00094036 and consent was not required.

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## REFERENCE

- Sodhi, C. P. et al. The human milk oligosaccharides 2'-fucosyllactose and 6'-sialyllactose protect against the development of necrotizing enterocolitis by inhibiting toll-like receptor 4 signaling. *Pediatr. Res.* <https://doi.org/10.1038/s41390-020-0852-3> (2020).

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