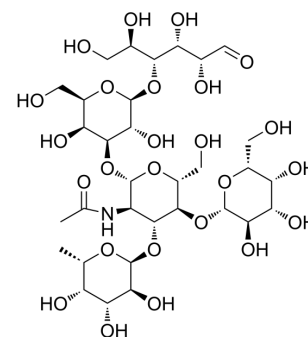


## Lacto-N-fucopentaose III

<b>Cat. No.:</b>	HY-N11451
<b>CAS No.:</b>	25541-09-7
<b>Molecular Formula:</b>	C <sub>32</sub> H <sub>55</sub> NO <sub>25</sub>
<b>Molecular Weight:</b>	853.77
<b>Target:</b>	Arginase; Aldehyde Dehydrogenase (ALDH); Indoleamine 2,3-Dioxygenase (IDO)
<b>Pathway:</b>	Immunology/Inflammation; Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Lacto-N-fucopentaose III (LNFP-III) is an immune modulator. Lacto-N-fucopentaose III reduces the severity of experimental autoimmune encephalomyelitis (EAE) and CNS inflammation <sup>[1]</sup> .
<b>In Vitro</b>	Lacto-N-fucopentaose III glycan (LNFP-III; 50 µg/mL; 48 h) induces the production of nitric oxide in inflammatory monocytes. Lacto-N-fucopentaose III reduces migration of dendritic cells across brain endothelium <sup>[1]</sup> . Lacto-N-fucopentaose III glycan (50 µg/mL; 48 h) significantly increased mRNA expression of arginase I (Arg1), aldehyde dehydrogenase 1, subfamily A2 (Aldh1a2), indoleamine 2,3-dioxygenase 1 (Ido1), and heme oxygenase 1 (Homx1) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Lacto-N-fucopentaose III glycan (50 µg/mouse; i.v.; twice a week for 2 weeks) significantly reduces the severity of experimental autoimmune encephalomyelitis (EAE) and CNS inflammation, and skews peripheral immune response to a Th2 dominant profile in mice <sup>[1]</sup> . Lacto-N-fucopentaose III (35 µg dextran conjugate/mouse; s.c.; daily for 2 weeks) ameliorates acute and persisting hippocampal synaptic plasticity and transmission deficits in a Gulf War Illness mouse model <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Zhu B, et al. Immune modulation by Lacto-N-fucopentaose III in experimental autoimmune encephalomyelitis. *Clin Immunol.* 2012 Mar;142(3):351-61.
- [2]. Brown KA, et al. Lacto-N-fucopentaose-III ameliorates acute and persisting hippocampal synaptic plasticity and transmission deficits in a Gulf War Illness mouse model. *Life Sci.* 2021 Aug 15;279:119707.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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