



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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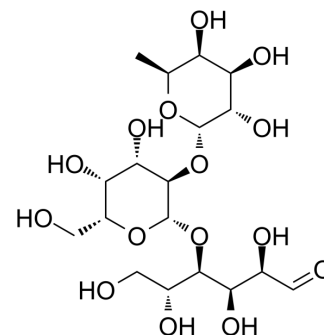
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## 2'-Fucosyllactose

<b>Cat. No.:</b>	HY-N9965
<b>CAS No.:</b>	41263-94-9
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>32</sub> O <sub>15</sub>
<b>Molecular Weight:</b>	488.44
<b>Target:</b>	TNF Receptor; Interleukin Related
<b>Pathway:</b>	Apoptosis; Immunology/Inflammation
<b>Storage:</b>	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 50 mg/mL (102.37 mM; Need ultrasonic)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	2.0473 mL	10.2367 mL	20.4733 mL	
5 mM	0.4095 mL	2.0473 mL	4.0947 mL	
10 mM	0.2047 mL	1.0237 mL	2.0473 mL	

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

2'-Fucosyllactose (2'-FL) is an oligosaccharide that could be derived from human milk. 2'-Fucosyllactose regulates the expression of CD14, alleviates colitis and regulates the gut microbiome. 2'-Fucosyllactose stimulates T cells to increase IFN- $\gamma$  production and decreases IL-6, IL-17, and TNF- $\alpha$  production of cytokines<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

Target: IFN- $\gamma$ , IL-6, IL-17, and TNF- $\alpha$ <sup>[1]</sup>

#### In Vitro

2'-Fucosyllactose (2'-FL; 0-12 mg/mL; 48 h) suppress cell-associated CD14 expression and to attenuate LPS (100  $\mu$ g/mL) stimulated IL-8 secretion in T84 cells<sup>[1]</sup>.

2'-Fucosyllactose (2 mg/mL; 48 h; T84 and HCT8 cells) ameliorates inflammation induced by bacterial invasion. 2'-Fucosyllactose inhibits ETEC invasion and attenuated the consequent IL-8 secretion<sup>[1]</sup>.

2'-Fucosyllactose (2 mg/mL; 48 h; T84 and HCT8 cells) induces macrophage migration inhibitory factor signal pathways that suppress inflammation<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis<sup>[1]</sup>

Cell Line:	T84 cells
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	Concentration:	0, 2, and 4 mg/mL
	Incubation Time:	48 hours
	Result:	Suppressed CD14 mRNA and reduced cell-associated CD14 protein expression.
	Western Blot Analysis <sup>[1]</sup>	
	Cell Line:	T84 and HCT8 cells
	Concentration:	2 mg/mL
	Incubation Time:	48 hours
	Result:	Suppressed CD14 mRNA and reduced cell-associated CD14 protein expression. Inhibited CD14 and NF-κB induction. Induced IκB and SOCS2 expression and STAT3 phosphorylation.
<b>In Vivo</b>	2'-Fucosyllactose (2'-FL; 100 mg (200 μL); i.g.; daily, for 4 d; C57BL/6 mice with AIEC infection) inhibits AIEC infection and inflammation in vivo <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	C57BL/6 mice (8 weeks) with AIEC (uropathogenic E. coli, and adherent-invasive E. coli) infection <sup>[1]</sup>
	Dosage:	100 mg (200 μL)
	Administration:	Oral gavage; daily, for 4 days
	Result:	Had colons lengths were closer to normal. Inhibited the colonisation of the colonic mucosa by O83-positive bacteria. Decreased CD14 expression, CD14 mRNA levels, IL-6, IL-17 and TNF-α levels in colonic.

## REFERENCES

[1]. He Y, et, al. The human milk oligosaccharide 2'-fucosyllactose modulates CD14 expression in human enterocytes, thereby attenuating LPS-induced inflammation. *Gut*. 2016 Jan;65(1):33-46.

[2]. Eiwegger T, et, al. Human milk--derived oligosaccharides and plant-derived oligosaccharides stimulate cytokine production of cord blood T-cells in vitro. *Pediatr Res*. 2004 Oct;56(4):536-40.

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

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