

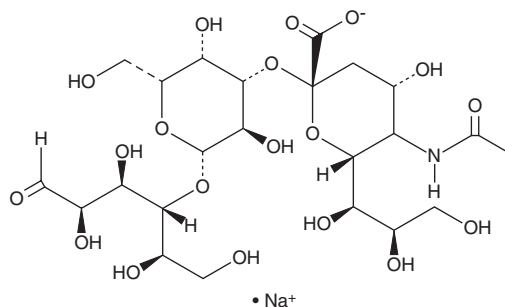
# PRODUCT INFORMATION



## 3'-Sialyllactose (sodium salt)

Item No. 16617

**CAS Registry No.:** 128596-80-5  
**Formal Name:** O-(N-acetyl- $\alpha$ -neuraminosyl)-(2 $\rightarrow$ 3)-  
O- $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 4)-D-  
glucose, monosodium salt  
**Synonym:** 3'-N-Acetylneuraminyl-D-lactose  
**MF:** C<sub>23</sub>H<sub>38</sub>NO<sub>19</sub> • Na  
**FW:** 655.5  
**Purity:**  $\geq$ 98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Animal/Bovine lactose



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

3'-Sialyllactose (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3'-sialyllactose (sodium salt) in the solvent of choice, which should be purged with an inert gas. 3'-Sialyllactose (sodium salt) is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3'-sialyllactose (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3'-sialyllactose (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

3'-Sialyllactose consists of the monosaccharide N-acetylneuraminic acid linked to the galactosyl subunit of lactose at the 3 position. It is an abundant oligosaccharide in the milk of many mammals, including cows and humans, particularly postpartum.<sup>1,2</sup> 3'-Sialyllactose avidly binds several viral strains, including strains of influenza, HIV-1, reovirus, and polyomavirus.<sup>3-6</sup> In some cases, binding of 3'-sialyllactose to viral proteins alters viral infectivity.<sup>3-5</sup> 3'-Sialyllactose also alters *Helicobacter* activity and impacts bacterial colonization of gut.<sup>7,8</sup>

### References

1. Duncan, P.I., Raymond, F., Fuerholz, A., et al. *PLoS One* **4**(12), 1-10 (2009).
2. Sprenger, N. and Duncan, P.I. *Adv. Nutr.* **3**(3), 392S-397S (2012).
3. Wu, W. and Air, G.M. *Virology* **325**(2), 340-350 (2004).
4. Rosa Borges, A., Wieczorek, L., Johnson, B., et al. *Virology* **408**(1), 80-88 (2010).
5. Iskarpatyoti, J.A., Morse, E.A., McClung, R.P., et al. *Virology* **433**(2), 489-497 (2012).
6. Neu, U., Khan, Z.M., Schuch, B., et al. *PLoS Pathog.* **9**(10), 1-10 (2013).
7. Simon, P.M., Goode, P.L., Mobasser, A., et al. *Infect. Immun.* **65**(2), 750-757 (1997).
8. Weiss, G.A. and Hennet, T. *Adv. Nutr.* **3**(3), 483S-488S (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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