

Product information  
Leaflet

# GlyCare® 3SL and 6SL

Human Milk Oligosaccharides brought to you by  
dsm-firmenich, at the forefront of HMO innovation

## Early life nutrition innovation from dsm-firmenich

Providing the best infant nutrition is vital for all families. That's why dsm-firmenich is proud to offer GlyCare® HMOs. These compounds are developed with science-backed quality and safety at their core. As a fully integrated manufacturer with one of the broadest HMO offerings, dsm-firmenich can reliably provide ease-of-scale no matter the size of your business. Partner with us to get your products one step closer to what nature intended.

Partner with dsm-firmenich for access to our broad portfolio of products, customized solutions, and expert services aimed at supporting your entire product life cycle, from concept to consumption.

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## Human Milk Oligosaccharides (HMOs): delivering the benefits nature intended

### Uniquely human

- HMOs are complex carbohydrates found in human breastmilk
- No other mammal has near the concentration and complexity of structures in their milk<sup>1-6</sup>

### Abundance and diversity in human milk

- 3rd largest component of human milk<sup>7</sup>
- >200 different HMOs identified in human milk, a diversity not seen in other animal milks<sup>4-6</sup>
- Variation occurs over lactation period, by maternal genetics, geographic region, and ethnicity<sup>8,9</sup>

### Complex structures with potential functional benefits

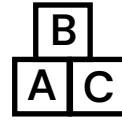
- Help establish a balanced early-life microbiota<sup>10,11</sup>
- Contribute to immune system support<sup>12-16</sup>

### 3'Sialyllactose (3'SL) and 6'Sialyllactose (6'SL) are sialylated HMOs found in both colostrum and mature milk<sup>19,20</sup>

- Human milk is a rich source of sialic acid (~1 g/L), while cow's milk formulas naturally contain small amounts (0–0.25 g/L).<sup>21</sup>
- Emerging science indicates that sialylated HMOs may be utilized as building blocks for the brain and may have a nutritional role in brain development in early infancy.<sup>22,23</sup>

**HMO functionality is structure-specific: not all HMOs serve the same purpose<sup>24,25</sup>**

## Potential functional benefits of GlyCare® 3SL and 6SL, as demonstrated primarily in pre-clinical studies



- Emerging evidence suggests a nutritional role in supporting brain development and health<sup>23,26,27</sup>



- May support normal immune function<sup>28-3</sup>
- Stimulates the growth of beneficial bacteria, including bifidobacteria, alone or when combined<sup>34-36</sup>
- Emerging evidence suggests a possible role in deflecting the adhesion of undesirable microbes to cell walls<sup>28-32</sup>



- Emerging evidence suggests potential role in protecting cells in the intestines and skin<sup>37-38</sup>

## Breastmilk – the gold standard

Breastmilk provides nutrients that are vital for an infant's growth and development and sets the standard in infant feeding.<sup>39,40</sup> Human milk oligosaccharides (HMOs) are the third largest solid component of human milk after lipids and lactose and a key differentiating feature between human milk and cow's milk. The unique structure, concentration, and variety of oligosaccharides in human milk sets them apart from those found in cow's milk.<sup>41,42</sup> Differences in health outcomes between breastfed and formula-fed infants may partly be explained by these features.<sup>8,41,43,44</sup>



## HMOs stimulate the growth of beneficial bacteria

- When ingested, HMOs resist digestion and reach the colon mostly intact<sup>42,45</sup>
- By selectively feeding the gut with beneficial bacteria, HMOs enhance the growth of helpful bacteria like bifidobacteria and limit the nutrient supply for undesirable organisms<sup>44,47,48</sup>
- HMOs also support production of short chain fatty acids and other metabolites that work to create a community of healthy microbes in the GI tract<sup>47-50</sup>

## GlyCare® 3SL and GlyCare® 6SL Product Information

- 5 years of shelf life from production date
- Purity levels from 88%
- White to off-white, homogenous, amorphous powder with a neutral to slightly sweet taste
- Contains up to 12% lactose<sup>§</sup>
- Manufactured without contact to latex, bisphenol A, or phthalates
- This product is free from: Animal derived ingredients (ADI), Allergens (except milk),<sup>§</sup> Genetically modified organisms (GMO)<sup>¥</sup>

§ according to EC regulation 1169/2011 annex II

¥ according to EC regulation 1829/2003 and 1830/2003



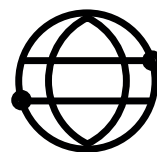
Broad product portfolio and a leading HMO innovator



Proven, reliable supply that scales with you



Highest safety and quality standards



Largest global market access: 160+ countries\*

\* We are continuously expanding our global approval footprint across application areas. For more details, please ask for our Regulatory Overview.

For more information, get in touch with your dsm-firmenich representative, or visit our website [www.dsm.com/human-nutrition](http://www.dsm.com/human-nutrition)

dsm-firmenich GlyCare® HMOs are produced to the highest quality of certifications, approvals, and procedures



ISO  
9001:2015



FSSC  
22000



SMETA



Halal



Kosher

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- GlyCare® LNnT
- GlyCare® 2FL/DFL
- GlyCare® 6SL
- GlyCare® 3SL
- GlyCare® LNT
- GlyCare® 3FL
- GlyCare® LNFP I