

Product Data Sheet

Product Name: Stachyose (hydrate)

Cat. No.: GC49227

Chemical Properties

Cas. No. 54261-98-2

SMILES OC[C@]1(O[C@@H]([C@H]([C@@H]1O)O)CO)O[C@H]2O[C@@H]([C@H]([C@@H]([C@H]2O)O)O)CO[C@H]3O[C@@H]([C@@H]([C@@H]([C@H]3O)O)O)CO[C@H]4O[C@@H]([C@@H]([C@@H]([C@H]4O)O)O)CO.O

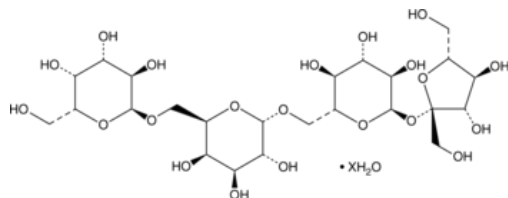
Formula C₂₄H₄₂O₂₁·XH₂O M.Wt 666.6

Solubility DMSO: 1 mg/ml, PBS (pH 7.2): 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Stachyose is an oligosaccharide and prebiotic.^{1,2,3} *In vivo*, stachyose (1 g/kg per day) reduces the number of colonic lesions and serum TNF- α , IL-6, IL-10, and IL-17a levels, as well as increases gut levels of *Akkermansia* and the probiotic *Lactobacillus*, in a rat model of colitis induced by dextran sulfate.¹ It decreases serum LPS, IL-6, and TNF- α levels and enriches *Phascolarctobacterium*, *Bilophila*, *Oscillospira*, and *Turicibacter* in the gut microbiota in a rat model of diabetes induced by high-fat diet and streptozotocin.² Stachyose also enhances berberine-induced blood glucose control and improvements in insulin resistance, as well as decreases the fecal concentration of short-chain fatty acids, in the KKAy mouse model of type 2 diabetes.³

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

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1.He, L., Zhang, F., Jian, Z., et al.Stachyose modulates gut microbiota and alleviates dextran sulfate sodium-induced acute colitis in miceSaudi J. Gastroenterol.26(3)153-159(2020) 2.Liu, G., Bei, J., Liang, L., et al.Stachyose improves inflammation through modulating gut microbiota of high-fat diet/streptozotocin-induced type 2 diabetes in ratsMol. Nutr. Food Res.62(6)e1700954(2018) 3.Cao, H., Li, C., Lei, L., et al.Stachyose improves the effects of berberine on glucose metabolism by regulating intestinal microbiota and short-chain fatty acids in spontaneous type 2 diabetic KKAY miceFront. Pharmacol.11578943(2020)

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