
Product Data Sheet

Product Name: 1-Kestose

Cat. No.: GC32294

Chemical Properties

Cas. No. 470-69-9

SMILES OC[C@]1(O[C@H](CO)[C@@H](O)[C@@H]1O)OC[C@]2(O[C@H](CO)[C@@H](O)[C@@H]2O)O[C@H]3O[C@@H]([C@@H](O)[C@H](O)[C@H]3O)COFormula C₁₈H₃₂O₁₆

M.Wt 504.44

Solubility Water: 100 mg/mL (198.24 mM); DMSO: 100 mg/mL (198.24 mM)

Storage -20°C, protect from light

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

1-Kestose is a fructooligosaccharide that has been found in onions and has prebiotic and antidiabetic activities.^{1,2,3} It increases levels of the beneficial bacterium *B. longum* in diluted adult human fecal samples when added to culture broth at a concentration of 0.5% w/v.³ Dietary supplementation with 1-kestose increases the proportion of cecal *Anaerostipes* and *Bifidobacterium* content, improves glucose tolerance, and prevents the development of type 2 diabetes in Otsuka Long-Evans Tokushima Fatty (OLETF) rats.²

1. Tochio, T., Kadota, Y., Tanaka, T., et al. 1-Kestose, the smallest fructooligosaccharide component, which efficiently stimulates *Faecalibacterium prausnitzii* as well as bifidobacteria in humans *Food* 7(9)140(2018)
 2. Watanabe, A., Kadota, Y., Kamio, R., et al. 1-Kestose supplementation mitigates the progressive deterioration of glucose metabolism in type 2 diabetes OLETF rats *Sci. Rep.* 10(1)15674(2020)
 3. Endo, A., Hirano, K., Ose, R., et al. Impact of kestose supplementation on the healthy adult microbiota in in vitro fecal batch cultures *Anaerobe* 61102076(2020)

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

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