Data Sheet (Cat.No.T84764)

TargetMol

Trimethyl chitosan

Chemical Properties

CAS No. : 52349-26-5

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Trimethyl chitosan is a cationic polymer derived from chemically modified natural chitosan; its water solubility and biocompatibility are enhanced through trimethylation of the amino groups. Trimethyl chitosan targets absorption-enhancing proteins in the tight junctions of intestinal and mucosal epithelial cells, thereby improving drug absorption and stability on mucosal surfaces. Trimethyl chitosan can stimulate the activity that promotes the transmembrane transport of hydrophilic drugs and can be used for drug delivery and the synthesis of nanoparticles.
Targets(IC50)	Others
In vitro	The addition of Trimethyl chitosan (0.05-1.0% (w/v); 2-4 h) to Caco-2 monolayers resulted in a concentration-dependent decrease in transepithelial electrical resistance (TEER) and a significant increase in the transmembrane transport efficiency of 14C-mannitol, with no significant effect on cell viability. [1]

Solubility Information

Solubility	H2O: 26.66 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Thanou MM, et al. Effect of degree of quaternization of N-trimethyl chitosan chloride for enhanced transport of hydrophilic compounds across intestinal caco-2 cell monolayers. J Control Release. 2000 Feb 14;64(1-3):15-25.
Mourya VK, et al. Trimethyl chitosan and its applications in drug delivery. J Mater Sci Mater Med. 2009 May;20(5):1057-79.

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