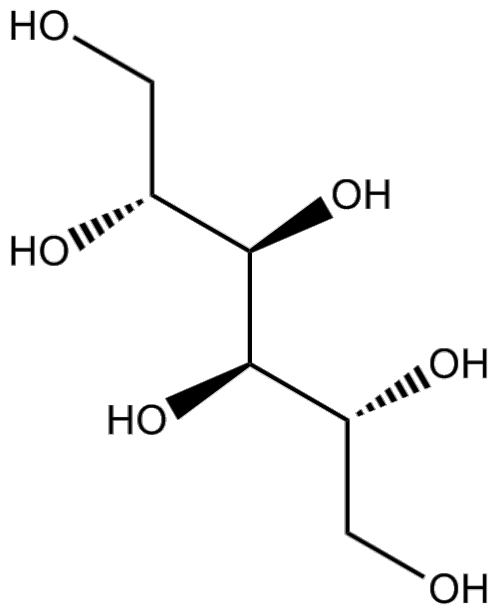
Product Data Sheet

Product Name: D-Mannitol
Cat. No.: GC12256

Chemical Properties

Cas. No.	69-65-8		
Chemical Name	(2R,3R,4R,5R)-hexane-1,2,3,4,5,6-hexol		
SMILES	C(C(C(C(C(CO)O)O)O)O)O		
Formula	$C_6H_{14}O_6$	M.Wt	182.17
Solubility	DMF: 20 mg/ml,DMSO: 20 mg/ml,Ethanol: 1 mg/ml,PBS (pH 7.2): 10 mg/ml	Storage	Store at RT
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



Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Background

D-Mannitol is an osmotic diuretic agent and a weak renal vasodilator.Target: OthersD(-)Mannitol is a sugar alcohol that can be used as an inert osmotic control substance. The uptake and phosphorylation of d-mannitol is catalyzed by the mannitol-specific phosphoenolpyruvate-dependent phosphotransferase systems (PTS). Mannitol can interact with neutrophils and monocytes. Experiments have shown that it is able to decrease neutrophil apoptosis in vitro. The compound has been used in studies as a stimulator of cecal microbial growth and cellulolytic activity in rabbits. It has been observed that mannitol can lower the fat digestibility and body fat accumulation in both normal and cecectomized rats, as well as upregulate monocyte HLA-DR, monocyte and neutrophil CD11b. Studies show that the mannitol operon is repressed by the transcription factor, mannitol operon repressor (MtlR) in Escherichia coli [1-3].

References:
[1]. Tan, K., et al., The mannitol operon repressor MtlR belongs to a new class of transcription regulators in bacteria. J Biol Chem, 2009. 284(52): p. 36670-9.
[2]. Nishiyama, A., et al., Mannitol lowers fat digestibility and body fat accumulation in both normal and cecectomized rats. J Nutr Sci Vitaminol (Tokyo), 2009. 55(3): p. 242-51.
[3]. Hanieh, H. and E. Sakaguchi, Effect of D-mannitol on feed digestion and cecotrophic system in rabbits. Anim Sci J, 2009. 80(2): p. 157-62.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA