Product data sheet



MedKoo Cat#: 319766				
Name: Levoglucose				
CAS: 921-60-8				
Chemical Formula: $C_6H_{12}O_6$				
Exact Mass: 180.0634				
Molecular Weight: 180.156				
Product supplied as:	Powder			
Purity (by HPLC):	$\geq 98\%$			
Shipping conditions	Ambient temperature			
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.			
	In solvent: -80°C 3 months; -20°C 2 weeks.			



1. Product description:

Levoglucose, also known as L-Glucose, is the L-isomer of glucose. It is the enantiomer of the more common D-glucose. L-Glucose does not occur naturally in higher living organisms, but can be synthesized in the laboratory. L-Glucose is indistinguishable in taste from D-glucose, but cannot be used by living organisms as source of energy because it cannot be phosphorylated by hexokinase, the first enzyme in the glycolysis pathway. Levoglucose may be used as diagnostic aid.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM		
DMF	20.0	111.01		
DMSO	40.0	222.03		
Ethanol	0.3	1.67		
PBS (pH 7.2)	10.0	55.51		

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	5.55 mL	27.75 mL	55.51 mL
5 mM	1.11 mL	5.55 mL	11.10 mL
10 mM	0.56 mL	2.78 mL	5.55 mL
50 mM	0.11 mL	0.56 mL	1.11 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

1. Lawson CJ, Homewood J, Taylor AJ. The Effects of L-glucose on memory in mice are modulated by peripherally acting cholinergic drugs. Neurobiol Learn Mem. 2002 Jan;77(1):17-28. doi: 10.1006/nlme.2000.4001. PMID: 11749083.

7. Bioactivity

Biological target:

L-Glucose (L-(-)-Glucose) is an enantiomer of D-glucose. L-Glucose can promote food intake.

In vitro activity

TBD

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In vivo activity

The present study examined the effects of peripherally administered L-glucose, a stereoisomer of D-glucose, in male mice. Intraperitoneal administration of L-glucose (300 mg/kg) before testing enhanced place learning in the Morris water maze. Mice injected with L-glucose had significantly shorter escape latencies than mice injected with saline (1 ml/kg).

Reference: Neurobiol Learn Mem. 2002 Jan;77(1):17-28. https://pubmed.ncbi.nlm.nih.gov/11749083/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.