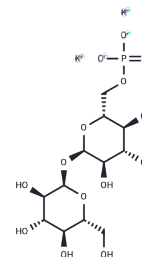


α,α -Trehalose 6-phosphate potassium

Chemical Properties

CAS No. :	136632-28-5
Formula:	C ₁₂ H ₂₁ K ₂ O ₁₄ P
Molecular Weight:	498.46
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	α,α -Trehalose 6-phosphate potassium is a glucose analogue with potent anti-hyperglycemic activity. It serves as a central signaling molecule in carbon metabolism regulation, particularly in plants and microorganisms, where it functions as a sensor for sucrose or glucose levels. In vivo, Tre6P is rapidly converted to its end product, α,α' -trehalose, by the enzyme α,α -Trehalose 6-phosphate phosphatase (T6PP). Beyond its role as a metabolic intermediate, Tre6P demonstrates potential in diabetic models to alleviate hyperglycemic symptoms by modulating glucose homeostasis.
Targets(IC50)	Endogenous Metabolite
In vivo	α,α -Trehalose 6-phosphate potassium exhibits significant hypoglycemic activity in alloxan-induced diabetic rats, alleviating hyperglycemia. The effect may involve suppression of endogenous glucose production and enhanced peripheral glucose utilization [2].

Solubility Information

Solubility	H ₂ O: 80 mg/mL (160.49 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0062 mL	10.0309 mL	20.0618 mL
5 mM	0.4012 mL	2.0062 mL	4.0124 mL
10 mM	0.2006 mL	1.0031 mL	2.0062 mL
50 mM	0.0401 mL	0.2006 mL	0.4012 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu, Chunliang, et al. An improved method for the large scale preparation of alpha, alpha'-trehalose-6-phosphate. *Tetrahedron letters: The International Journal for the Rapid Publication of Preliminary Communications in Organic Chemistry*, 2015, 56(23):3008-3010.

Oke JM, et al. Hypoglycaemic activity of alpha, alpha trehalose-6-phosphate. *Afr J Med Med Sci*. 1998 Sep-Dec;27 (3-4):219-23.

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