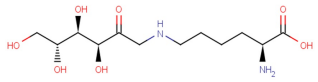
Data Sheet (Cat.No.T15350)

TargetMol
A DRUG SCREENING EXPERT

Fructosyl-lysine

Chemical Properties



CAS No.:	21291-40-7
Formula:	C12H24N2O7
Molecular Weight:	308.33
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Fructosyl-lysine is the precursor to glucosepane. Fructosyl-lysine is a lysine–arginine protein cross-link that can be an indicator in diabetes detection. Fructosyl-lysine is an amadori glycation product from the reaction of glucose and lysine by the Maillard reaction.
Targets(IC_{50})	precursor to glucosepane: None
In vitro	Fructosyl-lysine (100 μM; 1 hour) contains a carbohydrate moiety and appears to be phosphorylated, it can be converted to glucose 6-phosphate in bacterial extracts in E .coli extracts. Fructosyl-lysine (25 mM; 25 hours) lets E. coli growth at a rate of about one-third of that observed with glucose as a carbon source. Fructosyl-lysine (5 mM; 0.5 hours) catalyzes the ATP-dependent conversion of [14C]fructoselysine to anionic products showing the existence of a fructoselysine-kinase activity in E .coli extracts [2].
In vivo	In diabetic rats, Fructosyl-lysine and AGE residues are increased markedly in glomeruli, sciatic nerve, retina, and plasma protein [1].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.243 mL	16.216 mL	32.433 mL
5 mM	0.649 mL	3.243 mL	6.487 mL
10 mM	0.324 mL	1.622 mL	3.243 mL
50 mM	0.065 mL	0.324 mL	0.649 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Rabbani N, et al. Hidden complexities in the measurement of fructosyl-lysine and advanced glycation end products for risk prediction of vascular complications of diabetes. Diabetes. 2015 Jan;64(1):9-11.
2. Karachalias N, et al. Accumulation of fructosyl-lysine and advanced glycation end products in the kidney, retina and peripheral nerve of streptozotocin-induced diabetic rats. Biochem Soc Trans. 2003 Dec;31(Pt 6):1423-5.

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