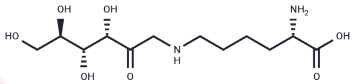
Data Sheet (Cat.No.T15350)

TargetMol

Fructosyl-lysine

Chemical Properties



CAS No. : 21291-40-7

Formula: C12H24N2O7

Molecular Weight: 308.33

Storage: Store at low temperature
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	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(IC50)	Endogenous Metabolite
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	H2O: 40 mg/mL (129.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2433 mL	16.2164 mL	32.4328 mL
5 mM	0.6487 mL	3.2433 mL	6.4866 mL
10 mM	0.3243 mL	1.6216 mL	3.2433 mL
50 mM	0.0649 mL	0.3243 mL	0.6487 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

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.
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.