Fructosyl-lysine dihydrochloride

Cat. No.: HY-129380A

CAS No.: 96192-35-7

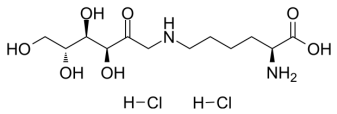
Molecular Formula: $C_{12}H_{26}Cl_2N_2O_7$

Molecular Weight: 381.25

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 40 mg/mL (104.92 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6230 mL	13.1148 mL	26.2295 mL
	5 mM	0.5246 mL	2.6230 mL	5.2459 mL
	10 mM	0.2623 mL	1.3115 mL	2.6230 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Fructosyl-lysine (Fructoselysine) dihydrochloride is an amadori glycation product from the reaction of glucose and lysine by the Maillard reaction. Fructosyl-lysine dihydrochloride is the precursor to glucosepane, a lysine–arginine protein cross-link that can be an indicator in diabetes detection[1].

IC_{50} & Target

IC50: precursor to glucosepane[2]

In Vitro

Fructosyl-lysine dihydrochloride (5 mM; 0.5 hours) catalyzes the ATP-dependent conversion of [^{14}C]fructoselysine to anionic products suggesting the existence of a fructoselysine-kinase activity in E .coli extracts[2].
Fructosyl-lysine dihydrochloride (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[2].
Fructosyl-lysine dihydrochloride (25 mM; 25 hours) lets E. coli growth at a rate of about one-third of that observed with glucose as a carbon source. Lysine itself does not support growth in the absence of other carbon source and does not affect the growth observed with glucose[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Fructosyl-lysine dihydrochloride and AGE residues is increased markedly in glomeruli, retina, sciatic nerve, and plasma

	protein in diabetic rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[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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