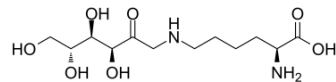


Fructosyl-lysine

Cat. No.:	HY-129380
CAS No.:	21291-40-7
Molecular Formula:	C ₁₂ H ₂₄ N ₂ O ₇
Molecular Weight:	308.33
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fructosyl-lysine (Fructoselysine) is an amadori glycation product from the reaction of glucose and lysine by the Maillard reaction. Fructosyl-lysine is the precursor to glucosepane, a lysine–arginine protein cross-link that can be an indicator in diabetes detection ^[1] .
IC₅₀ & Target	IC50: precursor to glucosepane ^[2]
In Vitro	<p>Fructosyl-lysine (5 mM; 0.5 hours) catalyzes the ATP-dependent conversion of [¹⁴C]fructoselysine to anionic products suggesting the existence of a fructoselysine-kinase activity in E. coli extracts^[2].</p> <p>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^[2].</p> <p>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. Lysine itself does not support growth in the absence of other carbon source and does not affect the growth observed with glucose^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Fructosyl-lysine and AGE residues is increased markedly in glomeruli, retina, sciatic nerve, and plasma protein in diabetic rats^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA