

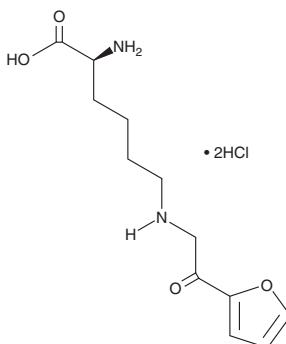
PRODUCT INFORMATION



Furosine (hydrochloride)

Item No. 38527

CAS Registry No.: 157974-36-2
Formal Name: N⁶-[2-(2-furanyl)-2-oxoethyl]-L-lysine, dihydrochloride
MF: C₁₂H₁₈N₂O₄ • 2HCl
FW: 327.2
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Furosine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the furosine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Furosine (hydrochloride) is slightly soluble (0.1-1 mg/ml) in acetonitrile and methanol.

Furosine (hydrochloride) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Furosine is an L-lysine (Item No. 36455) derivative formed by the Maillard reaction and a marker of overheating in foods.¹ It induces cell cycle arrest at the S phase in HEK293 and HepG2 cells when used at a concentration of 200 μM.² Furosine (500 mg/kg per day) increases testicular atrophy and decreases testosterone levels in mice.³ Fingernail levels of furosine are increased in patients with diabetes mellitus.⁴ It has been found in high-temperature milk and microwaved cookies.¹

References

1. Gökmen, V., Serpen, A., and Morales, F.J. Determination of furosine in thermally processed foods by hydrophilic interaction liquid chromatography. *J. AOAC Int.* **92**(5), 1460-1463 (2009).
2. Li, H.-Y., Xing, L., Wang, J.-Q., et al. Toxicology studies of furosine in vitro/in vivo and exploration of the related mechanism. *Toxicol. Lett.* **291**, 101-111 (2018).
3. Li, A., Wang, B., Yang, H., et al. Furosine posed toxic effects on primary sertoli cells through regulating Cep55/NF-κB/PI3K/Akt/FOXO1/TNF-α pathway. *Int. J. Mol. Sci.* **20**(15), 3716 (2019).
4. Oimomi, M., Nishimoto, S., Kitamura, Y., et al. Increased fructose-lysine of nail protein and blood glucose control in diabetic patients. *Horm. Metab. Res.* **18**(12), 827-829 (1986).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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