

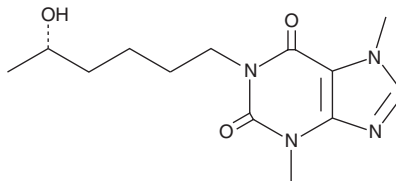
PRODUCT INFORMATION



(S)-Lisofylline

Item No. 13617

CAS Registry No.: 100324-80-9
Formal Name: 3,7-dihydro-1-[5S-hydroxyhexyl]-
3,7-dimethyl-1H-purine-2,6-dione
Synonyms: (+)-Lisofylline, (S)-LSF
MF: C₁₃H₂₀N₄O₃
FW: 280.3
Purity: ≥98%
UV/Vis.: λ_{max}: 273 nm
Supplied as: A crystalline 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

(S)-Lisofylline ((S)-LSF) is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-LSF in the solvent of choice, which should be purged with an inert gas. (S)-LSF is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (S)-LSF in these solvents is approximately 15, 3, and 12 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (S)-LSF can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (S)-LSF in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

LSF, a chiral metabolite of pentoxifylline, acts as a potent anti-inflammatory agent.^{1,2} (S)-LSF is the pharmacologically inactive optical enantiomer of (R)-LSF, the biologically active isomer.² When metabolized by isolated human liver cells, pentoxifylline is exclusively reduced to (S)-LSF in the cytosol, while reduction in liver microsomes is 85% stereoselective in favor of (S)-LSF formation.³ Thus, pentoxifylline is an inefficient prodrug for the delivery of therapeutically relevant LSF.

References

1. Yang, Z., Chen, M., Ellett, J.D., *et al.* Inflammatory blockade improves human pancreatic islet function and viability. *Am. J. Transplant.* **5**(3), 475-483 (2005).
2. Wyska, E., Pekala, E., and Szymura-Oleksiak, J. Interconversion and tissue distribution of pentoxifylline and lisofylline in mice. *Chirality* **18**(8), 644-651 (2006).
3. Lillibridge, J.A., Kalhorn, T.F., and Slattery, J.T. Metabolism of lisofylline and pentoxifylline in human liver microsomes and cytosol. *Drug Metab. Dispos.* **24**(11), 1174-1179 (1996).

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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