

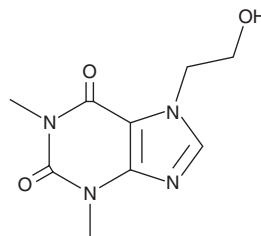
PRODUCT INFORMATION



7-(β-Hydroxyethyl)theophylline

Item No. 28372

CAS Registry No.: 519-37-9
Formal Name: 3,7-dihydro-7-(2-hydroxyethyl)-1,3-dimethyl-1H-purine-2,6-dione
Synonyms: Etophylline, Hydroxyethyltheophylline, NSC 113373
MF: C₉H₁₂N₄O₃
FW: 224.2
Purity: ≥98%
UV/Vis.: λ_{max}: 274 nm
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

7-(β-Hydroxyethyl)theophylline is supplied as a solid. A stock solution may be made by dissolving the 7-(β-hydroxyethyl)theophylline in the solvent of choice, which should be purged with an inert gas. 7-(β-Hydroxyethyl)theophylline is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 7-(β-hydroxyethyl)theophylline in these solvents is approximately 25 mg/ml.

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 7-(β-hydroxyethyl)theophylline can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 7-(β-hydroxyethyl)theophylline in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

7-(β-Hydroxyethyl)theophylline is a methylxanthine phosphodiesterase (PDE) inhibitor.¹ It reduces histamine, 5-hydroxytryptamine, and bradykinin-induced bronchoconstriction in an anesthetized guinea pig model of bronchial asthma.² Formulations containing 7-(β-hydroxyethyl)theophylline in combination with theophylline have been used in the treatment of asthma.

References

1. Mizon, J., Skandrani, E., and Mizon, C. Determination of the inhibitory activity of some new substituted theophyllines on the specific phosphodiesterase of cyclic nucleotides. *Therapie* **26(5)**, 911-917 (1971).
2. Ufkes, J.G., Leeuwijn, R.S., Ottenhof, M., *et al.* Efficacy of theophylline and its N-7-substituted derivatives in experimentally induced bronchial asthma in the guinea-pig. *Arch. Int. Pharmacodyn. Ther.* **253(2)**, 301-314 (1981).

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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