

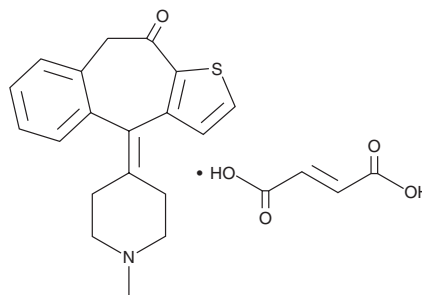
PRODUCT INFORMATION



Ketotifen (fumarate)

Item No. 20303

CAS Registry No.: 34580-14-8
Formal Name: 4,9-dihydro-4-(1-methyl-4-piperidinylidene)-10H-benzo[4,5]cyclohepta[1,2-b]thiophen-10-one-(2E)-2-butenedioate
Synonym: HC 20511
MF: C₁₉H₁₉NOS • C₄H₄O₄
FW: 425.5
Purity: ≥98%
UV/Vis.: λ_{max}: 250, 309 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

Ketotifen (fumarate) is supplied as a crystalline solid. A stock solution may be made by dissolving the ketotifen (fumarate) in the solvent of choice, which should be purged with an inert gas. Ketotifen (fumarate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ketotifen (fumarate) in DMSO and DMF is approximately 25 mg/ml and approximately 0.5 mg/ml in ethanol.

Ketotifen (fumarate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ketotifen (fumarate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ketotifen (fumarate) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ketotifen is a histamine H₁ receptor antagonist (K_i = 1.3 nM) and mast cell stabilizer.^{1,2} It is selective for H₁ receptors over H₂ and H₃ receptors (K_s = 987 and 2,500 nM, respectively).¹ Ketotifen (50 and 100 μM) inhibits degranulation of rat peritoneal mast cells induced by compound 48/80 (Item No. 22173).² It inhibits the passive cutaneous anaphylaxis (PCA) reaction in rats by 54.6% when administered orally at a dose of 20 mg/kg.³ Ketotifen (30 mg/kg) inhibits the quick phase airway response in a rat ovalbumin-induced immediate airway response model.⁴ Formulations containing ketotifen have been used in the treatment of itching associated with allergic conjunctivitis.

References

1. Sharif, N.A., Xu, S.X., and Yanni, J.M. *J. Ocul. Pharmacol. Ther.* **12**(4), 401-407 (1996).
2. Baba, A., Tachi, M., Ejima, Y., et al. *Cell Physiol. Biochem.* **38**(1), 15-27 (2016).
3. Nishikawa, Y., Shindo, T., Ishi, K., et al. *Chem. Pharm. Bull. (Tokyo)* **37**(3), 684-687 (1989).
4. Miyagawa, N., Iwasaki, H., Kato, T., et al. *Biol. Pharm. Bull.* **32**(12), 2260-2264 (2008).

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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