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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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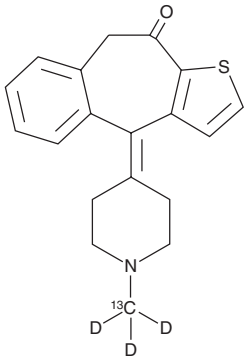
PRODUCT INFORMATION

Ketotifen-^{13}C-d$_3$

Item No. 28802



Formal Name:	4-(1-(methyl-^{13}C-d$_3$)piperidin-4-ylidene)-4,9-dihydro-10H-benzo[4,5]cyclohepta[1,2-b]thiophen-10-one
MF:	$C_{18}[^{13}C]H_{16}D_3NOS$
FW:	313.4
Chemical Purity:	≥98% (Ketotifen)
Deuterium Incorporation:	≥99% deuterated forms (d$_1$-d$_3$); ≤1% d$_0$
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years

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

Laboratory Procedures

Ketotifen-^{13}C-d$_3$ is intended for use as an internal standard for the quantification of ketotifen (Item No. 20303) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Ketotifen-^{13}C-d$_3$ is supplied as a solid. A stock solution may be made by dissolving the ketotifen-^{13}C-d$_3$ in the solvent of choice, which should be purged with an inert gas. Ketotifen-^{13}C-d$_3$ is soluble in organic solvents such as methanol, DMSO, acetonitrile, and dimethyl formamide.

Description

Ketotifen is a histamine H$_1$ receptor antagonist (K$_i$ = 1.3 nM) and mast cell stabilizer.[1,2] It is selective for H$_1$ receptors over H$_2$ and H$_3$ receptors (K$_i$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

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2. Baba, A., Tachi, M., Ejima, Y., *et al*. Anti-allergic drugs tranilast and ketotifen dose-dependently exert mast cell-stabilizing properties. *Cell Physiol. Biochem.* **38(1)**, 15-27 (2016).
3. Nishikawa, Y., Shindo, T., Ishi, K., *et al* Acrylamide derivatives as antiallergic agents. III. Synthesis and structure-activity relationships of N-[4-(4-diphenylmethyl-1-piperazinyl)butyl]- and N-[4-(4-diphenylmethylene-1-piperidyl)butyl]-3-heteroarylacry lamides. *Chem. Pharm. Bull. (Tokyo)* **37(3)**, 684-687 (1989).
4. Miyagawa, N., Iwasaki, H., Kato, T., *et al* Two pharmacological phases in antigen-induced immediate airway response in rats. *Biol. Pharm. Bull.* **32(12)**, 2260-2264 (2008).

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