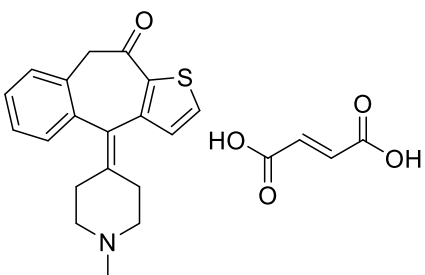


Product data sheet



MedKoo Cat#: 318082 Name: Ketotifen fumarate CAS: 34580-14-8 (fumarate) Chemical Formula: C ₂₃ H ₂₃ NO ₅ S Molecular Weight: 425.499		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.	
	In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Ketotifen is a second-generation noncompetitive H1 antihistamine and mast cell stabilizer. It is most commonly sold as a salt with fumaric acid, ketotifen fumarate, and is available in two forms. In its ophthalmic form, it is used to treat allergic conjunctivitis, or the itchy red eyes caused by allergies. In its oral form, it is used to prevent asthma attacks.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	25.0	58.75
DMSO	43.89	103.14
DMSO:PBS (pH 7.2) (1:2)	0.3	0.71
Ethanol	0.5	1.18
Water	16.67	39.18

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.35 mL	11.75 mL	23.50 mL
5 mM	0.47 mL	2.35 mL	4.70 mL
10 mM	0.24 mL	1.18 mL	2.35 mL
50 mM	0.05 mL	0.24 mL	0.47 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Pinke KH, Zorzella-Pezavento SFG, de Campos Fraga-Silva TF, Mimura LAN, de Oliveira LRC, Ishikawa LLW, Fernandes AAH, Lara VS, Sartori A. Calming Down Mast Cells with Ketotifen: A Potential Strategy for Multiple Sclerosis Therapy? Neurotherapeutics. 2020 Jan;17(1):218-234. doi: 10.1007/s13311-019-00775-8. PMID: 31463682; PMCID: PMC7007452.
2. Rezaei F, Ebrahimzadeh MA, Daryani A, Sharif M, Ahmadpour E, Sarvi S. The inhibitory effect of cromolyn sodium and ketotifen on Toxoplasma gondii entrance into host cells in vitro and in vivo. J Parasit Dis. 2016 Sep;40(3):1001-5. doi: 10.1007/s12639-014-0623-3. Epub 2014 Dec 20. PMID: 27605827; PMCID: PMC4996236.

In vivo study

1. Huang Z, Wang G, Yang B, Li P, Yang T, Wu Y, Yang X, Liu J, Li J. Mechanism of ketotifen fumarate inhibiting renal calcium oxalate stone formation in SD rats. Biomed Pharmacother. 2022 Jul;151:113147. doi: 10.1016/j.biopha.2022.113147. Epub 2022 May 25. PMID: 35643070.

Product data sheet



2. Abu-Dalu R, Zhang JM, Hanani M. The actions of ketotifen on intestinal smooth muscles. Eur J Pharmacol. 1996 Aug 8;309(2):189-93. doi: 10.1016/0014-2999(96)00342-1. PMID: 8874138.

7. Bioactivity

Biological target:

Ketotifen (HC 20-511) fumarate is an orally active second-generation noncompetitive histamine 1 (H1) receptor blocker and mast cell stabilizer. Ketotifen fumarate can block 6-phosphogluconate dehydrogenase (PGD) in vitro.

In vitro activity

Ket also triggered an evident lymphadenomegaly due to accumulation of T cells that produced higher levels of encephalitogenic cytokines in response to in vitro stimulation with MOG. Altogether these findings reinforce the concept that mast cells are particularly relevant in MS immunopathogenesis and that Ket, a known stabilizer of their activity, has the potential to be used in MS control.

Reference: Neurotherapeutics. 2020 Jan;17(1):218-234. <https://pubmed.ncbi.nlm.nih.gov/31463682/>

In vivo activity

In the guinea-pig colon ketotifen evoked non-cholinergic contractions with a pD₂ of 4.5, but still it inhibited responses to bradykinin (IC₅₀ = 75 microM). Ketotifen relaxed the unstimulated mouse colon with a pD₂ of 4.2.

Reference: Eur J Pharmacol. 1996 Aug 8;309(2):189-93. <https://pubmed.ncbi.nlm.nih.gov/8874138/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.