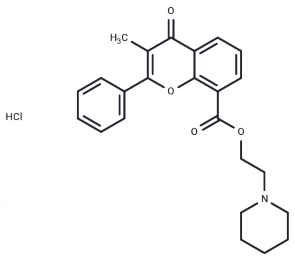
Data Sheet (Cat.No.T0703)

TargetMol

Flavoxate hydrochloride

Chemical Properties



CAS No. : 3717-88-2

Formula: C24H26ClNO4

Molecular Weight: 427.92

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Flavoxate hydrochloride (DW61) , a muscarinic AChR antagonist, is used in the therapy of various urinary syndromes and as an antispasmodic.
Targets(IC50)	Calcium Channel,AChR,PDE
In vitro	Without altering basal bladder pressure in rats, Flavoxate (3 mg/kg) can halt efferent nerve activity and associated bladder contractions for approximately 10 minutes. At the same dosage, administered intravenously, Flavoxate abolishes rhythmic bladder contractions, with maximum intervals of voiding contractions reaching 7.20 minutes. In rats, at a higher concentration (10 mg/kg), Flavoxate suppresses both the initial rapid-rise contraction phase (Phase 1) and the sustained contraction phase (Phase 2) to an equivalent degree. Furthermore, at this concentration, Flavoxate eliminates bladder contractions without altering contraction amplitude. Intracerebroventricular (ICV) injections of Flavoxate ranging from 50 to 200 mg or intrathecal (IT) injections of 100 to 200 mg dose-dependently abolish rhythmic bladder contractions within 5 to 15 minutes post-administration.
In vivo	Flavoxate inhibits cAMP formation in a concentration-dependent manner (0.01~10 μM) from membranes extracted from the rat cerebral cortex and striatum, an effect completely negated by pertussis toxin pretreatment. At concentrations greater than 10 μM, Flavoxate suppresses detrusor muscle contraction induced by acetylcholine, with a pD value of 4.55, and also inhibits contractions induced by Ca2+, with a pIC50 value of 4.92. Flavoxate concentration-dependently reduces K+-induced contractions of human bladder. It can displace [3H]nitrendipine at Ca2+ channel binding sites, with an IC50 of 254 μM. Flavoxate also concentration- and voltage-dependently inhibits the peak amplitude of inward Ba2+ currents sensitive to the voltage-dependent nifedipine in human detrusor smooth muscle cells (Ki: 10 μM), and inhibits the same Ba2+ currents at both 30°C (Ki = 5.1 mM) and 37°C (Ki = 4.6 mM).

Solubility Information

Solubility	DMSO: 6.49 mg/mL (15.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+90% Saline: 0.65 mg/mL (1.52 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3369 mL	11.6844 mL	23.3689 mL
5 mM	0.4674 mL	2.3369 mL	4.6738 mL
10 mM	0.2337 mL	1.1684 mL	2.3369 mL
50 mM	0.0467 mL	0.2337 mL	0.4674 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dansette PM, et al. Exp Toxicol Pathol, 2000, 52(2), 145-148.
Kimura Y, et al. Int J Urol, 1996, 3(3), 218-227.
Oka M, et al. Brain Res, 1996, 727(1-2), 91-98.
Tomoda T, et al. Br J Pharmacol, 2005, 146(1), 25-32.
Tomoda T, et al. Naunyn Schmiedebergs Arch Pharmacol, 2007, 376(3), 195-203.