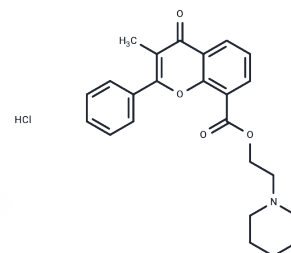


Flavoxate hydrochloride

Chemical Properties

CAS No. :	3717-88-2
Formula:	C ₂₄ H ₂₆ ClNO ₄
Molecular Weight:	427.92
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



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)	AChR
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 μ M) from membranes extracted from the rat cerebral cortex and striatum, an effect completely negated by pertussis toxin pretreatment. At concentrations greater than 10 μ M, Flavoxate suppresses detrusor muscle contraction induced by acetylcholine, with a pD value of 4.55, and also inhibits contractions induced by Ca ²⁺ , with a pIC ₅₀ value of 4.92. Flavoxate concentration-dependently reduces K ⁺ -induced contractions of human bladder. It can displace [3H]nitrendipine at Ca ²⁺ channel binding sites, with an IC ₅₀ of 254 μ M. Flavoxate also concentration- and voltage-dependently inhibits the peak amplitude of inward Ba ²⁺ currents sensitive to the voltage-dependent nifedipine in human detrusor smooth muscle cells (K _i : 10 μ M), and inhibits the same Ba ²⁺ currents at both 30°C (K _i = 5.1 mM) and 37°C (K _i = 4.6 mM).

Solubility Information

Solubility	DMSO: 1 mg/mL (2.34 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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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.

Reference

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Tomoda T, et al. Naunyn Schmiedebergs Arch Pharmacol, 2007, 376(3), 195-203.

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