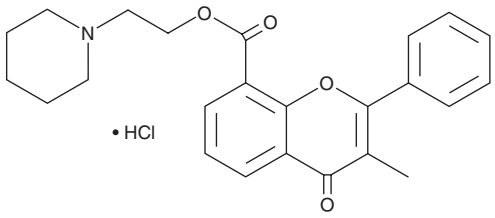
PRODUCT INFORMATION

Flavoxate (hydrochloride)

Item No. 19096

CAS Registry No.: 3717-88-2
Formal Name: 3-methyl-4-oxo-2-phenyl-4H-1-benzopyran-8-carboxylic acid 2-(1-piperidinyl)ethyl ester, monohydrochloride
Synonyms: NSC 114649, Rec 7/0040
MF: $C_{24}H_{25}NO_4$ • HCl
FW: 427.9
Purity: ≥98%
UV/Vis.: λ_{max}: 241, 289, 316 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

Flavoxate (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the flavoxate (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Flavoxate (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of flavoxate (hydrochloride) in these solvents is approximately 1 mg/ml.

Flavoxate (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, flavoxate (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Flavoxate (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Flavoxate is an inhibitor of L-type calcium channels and an antimuscarinic agent.[1] It induces relaxation of potassium-precontracted isolated human urinary bladder detrusor muscle (IC_{50} = 2 µM) and reduces contractions induced by the acetylcholine receptor agonist carbachol (carbamoylcholine; Item No. 14486) or calcium in isolated rat detrusor strips.[1,2] Microinjection of flavoxate (0.68 µg/animal) into the oral pontine reticular nucleus inhibits reflex micturition in decerebrated cats, and intravenous or intracerebroventricular administration reduces isovolumetric rhythmic bladder contractions in rats.[2] Formulations containing flavoxate have previously been used in the treatment of frequent or urgent urination, increased nocturnal urination, bladder pain, and urinary incontinence.

References

1. Tomoda, T., Aishima, M., Takano, N., *et al.* The effects of flavoxate hydrochloride on voltage-dependent L-type Ca^{2+} currents in human urinary bladder. *Br. J. Pharmacol.* **146(1)**, 25-32 (2005).
2. Kimura, Y., Sasaki, Y., Hamada, K., *et al.* Mechanisms of the suppression of the bladder activity by flavoxate. *Int. J. Urol.* **3(3)**, 218-227 (1996).

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