

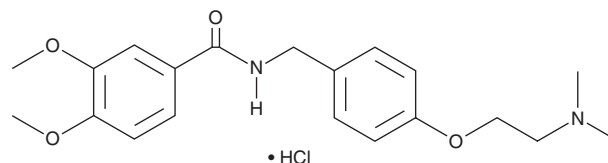
PRODUCT INFORMATION



Itopride (hydrochloride)

Item No. 31183

CAS Registry No.: 122892-31-3
Formal Name: N-[[4-[2-(dimethylamino)ethoxy]phenyl]methyl]-3,4-dimethoxybenzamide, monohydrochloride
MF: C₂₀H₂₆N₂O₄ • HCl
FW: 394.9
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 259 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

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of itopride (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of itopride (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Itopride is an inhibitor of acetylcholinesterase (AChE; IC₅₀ = 1.6 μM for the rat stomach enzyme) and a prokinetic agent.¹ It induces contractions in isolated rabbit duodenum when used at concentrations ranging from 1 to 100 μM and enhances ACh-induced contractions in isolated guinea pig stomach circular muscle strips.^{2,3} Itopride (100 mg/kg) enhances normal gastric antral motility and improves gastric antral hypomotility and delayed gastric emptying induced by clonidine (Item No. 15949) in rats.¹ Formulations containing itopride have been used in the treatment of functional dyspepsia.

References

1. Kawachi, M., Matsunaga, Y., Tanaka, T., *et al.* Acotiamide hydrochloride (Z-338) enhances gastric motility and emptying by inhibiting acetylcholinesterase activity in rats. *Eur. J. Pharmacol.* **666(1-3)**, 218-225 (2011).
2. Butt, A.I., Khan, B.T., Khan, A., *et al.* Ranitidine can potentiate the prokinetic effect of itopride at low doses- an in vitro study. *J. Ayub Med. Coll. Abbottabad* **29(4)**, 554-558 (2017).
3. Ito, K., Kawachi, M., Matsunaga, Y., *et al.* Acotiamide hydrochloride, a therapeutic agent for functional dyspepsia, enhances acetylcholine-induced contraction via inhibition of acetylcholinesterase activity in circular muscle strips of guinea pig stomach. *Drug Res. (Stuttg.)* **66(4)**, 196-202 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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