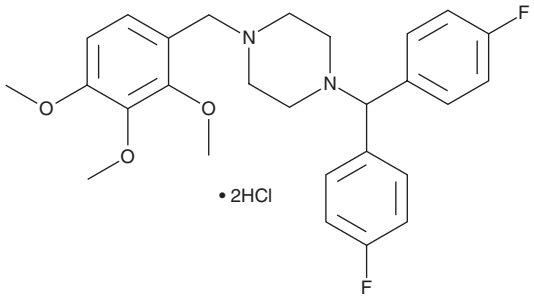
PRODUCT INFORMATION

Lomerizine (hydrochloride)

Item No. 28374

CAS Registry No.: 101477-54-7
Formal Name: 1-[*bis*(4-fluorophenyl)methyl]-4-[(2,3,4-trimethoxyphenyl)methyl]-piperazine, dihydrochloride
Synonym: KB-2796
MF: $C_{27}H_{30}F_2N_2O_3$ • 2HCl
FW: 541.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Lomerizine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the lomerizine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Lomerizine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of lomerizine (hydrochloride) in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

Lomerizine is a voltage-dependent calcium channel blocker that inhibits low- and high-voltage activated calcium currents in rat hippocampal CA1 pyramidal neurons with IC_{50} values of 1.9 and 4 µM, respectively.[1,2] It inhibits vasoconstriction induced by potassium chloride, serotonin (5-HT; Item No. 14332), or vasopressin in isolated rat basilar arteries when used at a concentration of 1 µM.[1] Lomerizine (1 µM) reduces neurotoxicity induced by glutamate, NMDA, or kainate in rat retinal primary cell cultures.[3] It reduces retinal damage in a rat model of retinal ischemia-reperfusion injury when administered at a dose of 1 mg/kg.

References

1. Ishii, M., Kobayashi, S., Ohkura, M., *et al.* Inhibitory effect of lomerizine, a prophylactic drug for migraines, on serotonin-induced contraction of the basilar artery. *J. Pharmacol. Sci.* **111(2)**, 221-225 (2009).
2. Akaike, N., Ishibashi, H., Hara, H., *et al.* Effect of KB-2796, a new diphenylpiperazine Ca^{2+} antagonist, on voltage-dependent Ca^{2+} currents and oxidative metabolism in dissociated mammalian CNS neurons. *Brain Res.* **619(1-2)**, 263-270 (1993).
3. Toriu, N., Akaike, A., Yasuyoshi, H., *et al.* Lomerizine, a Ca^{2+} channel blocker, reduces glutamate-induced neurotoxicity and ischemia/reperfusion damage in rat retina. *Exp. Eye Res.* **70(4)**, 475-484 (2000).

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