Lercanidipine (hydrochloride)

Item No. 29104

CAS Registry No.: 132866-11-6
Formal Name: 3,5-pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-
(3-nitrophenyl)-3-[2-[(3,3-
diphenylpropyl)methylamino]-1,1-
dimethylethyl] 5-methyl ester, monohydrochloride

MF: C$_{36}$H$_{41}$N$_3$O$_6$ • HCl
FW: 648.2
Purity: ≥98%
UV/Vis.: $\lambda_{\text{max}}$: 239, 363 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

Laboratory Procedures

Lercanidipine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the lercanidipine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Lercanidipine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of lercanidipine (hydrochloride) in these solvents is approximately 2, 15, and 25 mg/ml, respectively.

Lercanidipine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lercanidipine (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Lercanidipine (hydrochloride) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Lercanidipine is a dihydropyridine L-type calcium channel blocker. It binds to rat brain and heart homogenates ($K_\text{s}$ = 0.24-0.3 and 0.22 nM, respectively, in radioligand binding assays) and inhibits potassium-induced contraction of isolated rat aorta ($IC_{50}$ = 1.3 nM). Lercanidipine reduces diastolic blood pressure (DBP) in normotensive and spontaneously hypertensive rats with ED$_{25}$ values of 16.3 and 15.5 µg/kg, respectively. Formulations containing lercanidipine have been used in the treatment of hypertension.

Reference