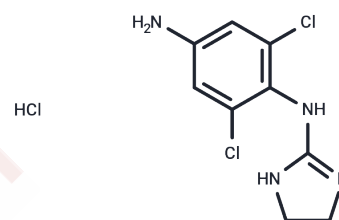


Apraclonidine hydrochloride

Chemical Properties

CAS No. :	73218-79-8
Formula:	C ₉ H ₁₁ Cl ₃ N ₄
Molecular Weight:	281.57
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Apraclonidine hydrochloride (ALO 2145) is an α_2 -adrenergic agonist and a weak α_1 -adrenergic receptor agonist. Apraclonidine hydrochloride lowers intraocular pressure in human eyes and can be used in studies about glaucoma therapy.
Targets(IC50)	Adrenergic Receptor
In vitro	Apraclonidine hydrochloride penetrates the cornea and blood-brain barrier to a lesser extent[2].
In vivo	Apraclonidine hydrochloride elevates intraocular pressure as well as glaucoma. Apraclonidine reduces aqueous humor synthesis and vasoconstrictor actions at the anterior segment branches of the ophthalmic artery[2]. Apraclonidine (1.15%) causes a 98% inhibition of PGE ₂ -induced aqueous flare elevation[3].

Solubility Information

Solubility	DMSO: 112.5 mg/mL (399.55 mM), Sonication is recommended. H ₂ O: 11.2 mg/mL (39.78 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (14.21 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5515 mL	17.7576 mL	35.5151 mL
5 mM	0.7103 mL	3.5515 mL	7.103 mL
10 mM	0.3552 mL	1.7758 mL	3.5515 mL
50 mM	0.071 mL	0.3552 mL	0.7103 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wijemanne S, et al. Apraclonidine in the treatment of ptosis. *J Neurol Sci.* 2017;376:129-132.

Searles RV, et al. Aqueous humor dynamics in anesthetized rats infused with intracameral apraclonidine. *Pharmacology.* 1999;58(4):220-226.

Yoriko Hayasaka, et al. Effects of topical antiglaucoma eye drops on prostaglandin E(2)-induced aqueous flare elevation in pigmented rabbits. *Invest Ophthalmol Vis Sci*

Cooper-Knock J, Pepper I, Hodgson T, Sharrack B. Early diagnosis of Horner syndrome using topical apraclonidine. *J Neuroophthalmol.* 2011 Sep;31(3):214-6.

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