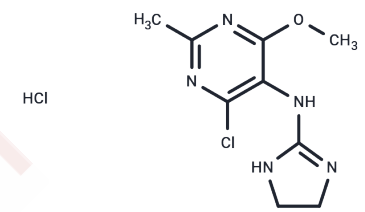
Data Sheet (Cat.No.T40869)

TargetMol

Moxonidine hydrochloride

Chemical Properties



CAS No. : 75536-04-8

Formula: C9H13Cl2N5O

Molecular Weight: 278.14

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	Moxonidine Hydrochloride serves as a selective agonist for the imidazoline receptor subtype 1 and functions as an antihypertensive agent. It primarily acts within the central nervous system and demonstrates a significant preference for I1 imidazoline receptors over α2-adrenoceptors, with a 40-fold higher affinity. This compound effectively reduces stimulated norepinephrine overflow, indicating its potent efficacy. Despite similar agents like AGN192403 targeting the same receptor, moxonidine's dose-response efficacy remains unaffected. Its ability to lower blood pressure and reduce heart rate is distinctly mediated through imidazoline receptors, reliant on well-preserved noradrenergic pathways within the rostral ventrolateral medulla (RVLM). This interaction is potentially linked to a specific 42 kDa imidazoline receptor protein, emphasizing its unique mechanism of action compared to other drugs like clonidine.
Targets(IC50)	Others,Adrenergic Receptor,Imidazoline Receptor,LDLR

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5953 mL	17.9766 mL	35.9531 mL
5 mM	0.7191 mL	3.5953 mL	7.1906 mL
10 mM	0.3595 mL	1.7977 mL	3.5953 mL
50 mM	0.0719 mL	0.3595 mL	0.7191 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

Schafer, U., et al., Presynaptic effects of moxonidine in isolated buffer perfused rat hearts: role of imidazoline-1 receptors and alpha2-adrenoceptors. J Pharmacol Exp Ther, 2002. 303(3): p. 1163-70.
Chan, C.K., et al., Imidazoline receptors associated with noradrenergic terminals in the rostral ventrolateral medulla mediate the hypotensive responses of moxonidine but not clonidine. Neuroscience, 2005. 132(4): p. 991-1007.

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