

## Product Data Sheet

Product Name: Moxonidine

Cat. No.: GC12629

### Chemical Properties

Cas. No. 75438-57-2

Chemical Name 4-chloro-N-(4,5-dihydro-1H-imidazol-2-yl)-6-methoxy-2-methylpyrimidin-5-amine

SMILES CC1=NC(=C(C(=N1)Cl)NC2=NCCN2)OC

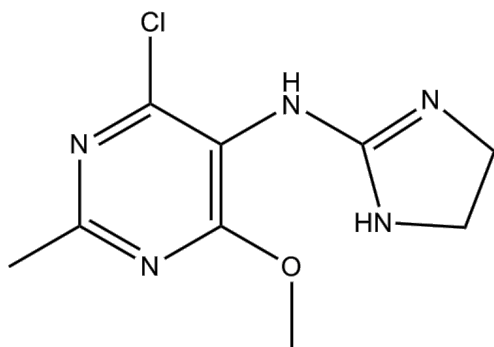
Formula  $C_9H_{12}ClN_5O$  M.Wt 241.68

Solubility  $\geq 11.3$  mg/mL in DMSO,  $\geq 4.74$  mg/mL in EtOH with ultrasonic Storage Store at  $-20^{\circ}\text{C}$

General tips For obtaining a higher solubility, please warm the tube at  $37^{\circ}\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^{\circ}\text{C}$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Moxonidine is an agonist of I1-imidazoline receptor with  $\text{EC}_{50}$  value of  $1.3\mu\text{M}$  [1].

Moxonidine can bind to both I1-imidazoline receptor (I1R) and  $\alpha_2$ -adrenergic receptor ( $\alpha_2\text{AR}$ ). The selectivity of moxonidine for I1R is 33-fold over  $\alpha_2\text{AR}$ . Moxonidine plays its antihypertensive role in the central nervous system. It has a central site of action. It is shown no effect in pithed rats and in cats following spinal cord transaction. Moxonidine also reduces sympathetic outflow and lowers peripheral vascular resistance [1, 2].

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Besides the antihypertensive efficacy, Moxonidine is reported to have effects on gastric secretion and gastric mucosal injury in rats. It significantly reduces basal gastric acid secretion when given doses of 0.1 (63% inhibition) and 1.0 (65% inhibition) mg/kg. Even 0.01mg/kg moxonidine can reduce the gastric mucosal injury induced by ethanol [3].

### References:

- [1] George OK, Gonzalez RR Jr, Edwards LP. Moxonidine, an antihypertensive agent, is permissive to alpha1-adrenergic receptor pathway in the rat-tail artery. J Cardiovasc Pharmacol. 2004 Feb;43(2):306-11.
- [2] Morris ST, Reid JL. Moxonidine: a review. J Hum Hypertens. 1997 Oct;11(10):629-35.
- [3] Glavin GB, Smyth DD. Effects of the selective I1 imidazoline receptor agonist, moxonidine, on gastric secretion and gastric mucosal injury in rats. Br J Pharmacol. 1995 Feb;114(4):751-4.

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