

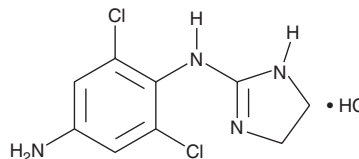
PRODUCT INFORMATION



Apraclonidine (hydrochloride)

Item No. 23904

CAS Registry No.: 73218-79-8
Formal Name: 2,6-dichloro-N¹-(4,5-dihydro-1H-imidazol-2-yl)-1,4-benzenediamine, monohydrochloride
Synonyms: AL 02145, ALO 2145
MF: C₉H₁₀Cl₂N₄ • HCl
FW: 281.6
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Apraclonidine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the apraclonidine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Apraclonidine (hydrochloride) is slightly soluble in methanol and DMSO. We do not recommend storing the aqueous solution for more than one day.

Description

Apraclonidine is an α_2 -adrenergic receptor (α_2 -AR) agonist and structural analog of clonidine (Item No. 15949).¹ It binds to α_2 -ARs in calf cortex, rat kidney, and rat spleen with IC₅₀ values of 0.9, 4.3, and 4.2 nM, respectively. Apraclonidine also binds to α_2 -ARs in rat cerebral cortex, pig submandibular gland and lung tissue, and in dog kidney membrane (K_ds = 0.87, 5.28, 1.30, and 5.25 nM, respectively).^{2,3} It inhibits noradrenaline-stimulated contraction in guinea pig ileum and rabbit vas deferens (EC₅₀s = 7.59 and 6.76 nM, respectively).⁴ Ophthalmic formulations containing apraclonidine have been used to treat elevated intraocular pressure.

References

1. Rouot, B.R. and Snyder, S.H. [³H]Para-amino-clonidine: A novel ligand which binds with high affinity to alpha-adrenergic receptors. *Life Sci.* **25(9)**, 769-774 (1979).
2. Feller, D.J. and Bylund, D.B. Comparison of *alpha*-2 adrenergic receptors and their regulation in rodent and porcine species. *J. Pharmacol. Exp. Ther.* **228(2)**, 275-282 (1984).
3. Evans, R.G. and Haynes, J.M. Characterization of binding sites for [³H]-idazoxan, [³H]-P-aminoclonidine and [³H]-rauwolscine in the kidney of the dog. *Clin. Exp. Pharmacol. Physiol.* **21(8)**, 649-658 (1994).
4. Konno, F., Kusunoki, M., and Takayanagi, I. Receptor interactions of a series of imidazolines: Comparison of the *alpha*₂-adrenoceptors between the rabbit vas deferens and guinea pig ileum. *Jpn. J. Pharmacol.* **44(2)**, 171-178 (1987).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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