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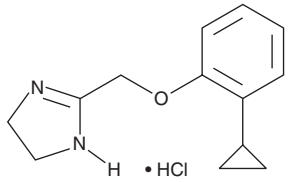
# PRODUCT INFORMATION

## Cirazoline (hydrochloride)

*Item No. 21791*

**CAS Registry No.:** 40600-13-3
**Formal Name:** 2-[(2-cyclopropylphenoxy)methyl]-4,5-dihydro-1H-imidazole, monohydrochloride
**MF:** $C_{13}H_{16}N_2O \bullet HCl$
**FW:** 252.7
**Purity:** ≥98%
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥2 years




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

### Laboratory Procedures

Cirazoline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the cirazoline (hydrochloride) in the solvent of choice. Cirazoline (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of cirazoline (hydrochloride) in these solvents is approximately 3, 33, and 16 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of cirazoline (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cirazoline (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Cirazoline is an $\alpha_1$-adrenergic receptor ($\alpha_1$-AR) agonist ($K_i$s = 120, 960, and 660 nM for recombinant $\alpha_{1A}$-, $\alpha_{1B}$-, and $\alpha_{1D}$-ARs, respectively, in CHO cell membranes).[1] It acts as a full agonist at $\alpha_{1A}$- and a partial agonist at $\alpha_{1B}$- and $\alpha_{1D}$-ARs *in vitro* ($EC_{50}$s = 70.7, 79.4, and 239.8 nM, respectively). It also acts as an antagonist at $\alpha_2$-ARs with a $pA_2$ value of 7.56 to inhibit the norepinephrine-induced twitch response in isolated pig ileum.[2] Cirazoline (0.01-1 µg/kg) decreases blood pressure when administered *via* microinjection to the nucleus reticularis lateralis (NRL) of anesthetized normotensive cats.[3] It enhances spatial memory and reduces depressive- and anxiety-like behavior in mice when administered at a concentration of 10 mg/L in drinking water for 2-9 months.[4] It also enhances performance in the variable delayed response task in aged rhesus monkeys at high doses of 1-10 µg/kg but impairs performance at lower doses of 0.01-1 µg/kg.[5]

### References


1. Horie, K., Obika, K., Foglar, R., *et al. Br. J. Pharmacol.* **116(1)**, 1611-1618 (1995).
2. Ruffolo, R.R., Jr. and Waddell, J.E. *Br. J. Pharmacol.* **77(1)**, 169-176 (1982).
3. Bousquet, P., Feldman, J., and Schwartz, J. *J. Pharmacol. Exp. Ther.* **2301(1)**, 232-236 (1984).
4. Doze, V.A., Papay, R.S., Goldenstein, B.L., *et al. Mol. Pharmacol.* **80(4)**, 747-758 (2011).
5. Arnsten, A.F.T. and Jentsch, J.D. *Pharmacol. Biochem. Behav.* **58(1)**, 55-59 (1997).





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