Clonidine (hydrochloride)
Item No. 15949

CAS Registry No.: 4205-91-8
Formal Name: N-(2,6-dichlorophenyl)-4,5-dihydro-1H-imidazol-2-amine, monohydrochloride
Synonyms: Catapres, Kapvay®, ST 155
MF: C9H9Cl2N3 • HCl
FW: 266.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that clonidine (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Clonidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the clonidine (hydrochloride) in the solvent of choice. Clonidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of clonidine (hydrochloride) in these solvents is approximately 2, 3, and 0.3 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 clonidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of clonidine (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Clonidine is a centrally acting α₂-adrenergic receptor agonist that decreases peripheral vascular resistance by centrally inhibiting sympathetic nerve activity.¹ In isolated mesenteric arteries precontracted with norepinephrine, clonidine induces relaxation at 10 µM.² It can also open K⁺ channels and hyperpolarize mesenteric artery plasma membrane at this concentration.² The antihypertensive effects of clonidine have also been attributed to its agonism of the imidazoline (I₁) receptor (Kᵢ = 4-8 nM), which mediates the sympatho-inhibitory actions of imidazolines to lower blood pressure.³⁴

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/15949

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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