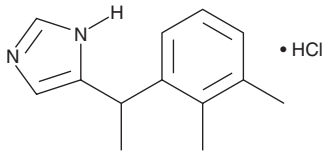
PRODUCT INFORMATION

Medetomidine (hydrochloride)

Item No. 16454

CAS Registry No.: 86347-15-1
Formal Name: 5-[1-(2,3-dimethylphenyl)ethyl]-1H-imidazole, monohydrochloride
Synonym: MPV 785
MF: $C_{13}H_{16}N_2 \bullet HCl$
FW: 236.7
Purity: ≥98%
UV/Vis.: λ_{max}: 212 nm
Supplied as: A crystalline 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

Medetomidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the medetomidine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Medetomidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Medetomidine (hydrochloride) in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 medetomidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of medetomidine (hydrochloride) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Medetomidine is an agonist of α_2-adrenergic receptors (α_2-ARs; K_i = 1.08 nM).[1] It is selective for α_2-ARs over α_1-ARs (K_i = 1,750 nM). Medetomidine induces sedation in dogs.[2] Formulations containing medetomidine have been used as sedatives in veterinary medicine. This product is also available as an analytical reference standard (Item Nos. 38807 | 38582).

References

1. Virtanen, R., Savola, J.M., Saano, V., *et al.* Characterization of the selectivity, specificity and potency of medetomidine as an α_2-adrenoceptor agonist. *Eur. J. Pharmacol.* **150(1-2),** 9-14 (1988).
2. Vainio, O. and Vähä-Vahe, T. Reversal of medetomidine sedation by atipamezole in dogs. *J. Vet. Pharmacol. Ther.* **13(1),** 15-22 (1990).

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