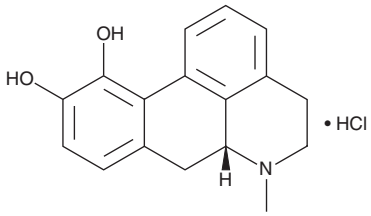
PRODUCT INFORMATION

(−)-Apomorphine (hydrochloride)

Item No. 16094

CAS Registry No.: 314-19-2
Formal Name: 5,6,6aR,7-tetrahydro-6-methyl-4H-dibenzo[de,g]quinoline-10,11-diol, monohydrochloride
Synonyms: NSC 11442, Uprima
MF: $C_{17}H_{17}NO_2$ • HCl
FW: 303.8
Purity: ≥95%
UV/Vis.: λ_{max}: 274 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

(−)-Apomorphine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the (−)-apomorphine (hydrochloride)in the solvent of choice. (−)-Apomorphine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (−)-apomorphine (hydrochloride) in these solvents is approximately 1, 15, and 20 mg/ml, respectively.

(−)-Apomorphine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (−)-apomorphine (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (−)-Apomorphine (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(−)-Apomorphine is a non-selective dopamine receptor agonist that exhibits pK_i values of 6.43, 7.08, 7.59, 8.36, and 7.83 for human recombinant D_1, D_2L, D_3, D_4, and D_5 receptors, respectively.[1,2] It produces biphasic effects on locomotor activity and displays anti-parkinsonism and neuroprotective actions.[1,3,4]

References

1. Millan, M.J., Maiofiss, L., Cussac, D., *et al*. Differential actions of antiparkinson agents at multiple classes of monoaminergic receptor. I. A multivariate analysis of the binding profiles of 14 drugs at 21 native and cloned human receptor subtypes. *J. Pharmacol. Exp. Ther.* **303(2)**, 791-804 (2002).
2. Seeman, P., Grigoriadis, D.E., and Niznik, H.B. Selectivity of agonists and antagonists at D_2 dopamine receptors compared to D_1 and S_2 receptors. *Drug Dev. Res.* **9**, 63-69 (1986).
3. Newman-Tancredi, A., Cussac, D., Audinot, V., *et al*. Differential actions of antiparkinson agents at multiple classes of monoaminergic receptor. II. Agonist and antagonist properties at subtypes of dopamine D_2-like receptor and α_1/α_2-adrenoceptor. *J. Pharmacol. Exp. Ther.* **303(2)**, 805-814 (2002).
4. Schechter, M.D., Rosecrans, J.A., and Glennon, R.A. Comparison of behavioral effects of cathinone, amphetamine and apomorphine. *Pharmacol. Biochem. Behav.* **20(2)**, 181-184 (1984).

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