# PRODUCT INFORMATION

## CP 99,994 (hydrochloride)

*Item No. 27669*

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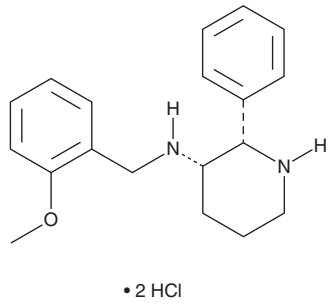
|---|---|
| **CAS Registry No.:** | 145148-39-6 |
| **Formal Name:** | (2S,3S)-N-[(2-methoxyphenyl) methyl]-2-phenyl-3-piperidinamine, dihydrochloride |
| **MF:** | $C_{19}H_{24}N_2O \bullet 2HCl$ |
| **FW:** | 369.3 |
| **Purity:** | ≥98% |
| **Supplied as:** | A solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




• 2 HCl

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

### Laboratory Procedures

CP 99,994 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the CP 99,994 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. CP 99,994 (hydrochloride) is soluble in organic solvents such as DMSO. It is also soluble in water. The solubility of CP 99,994 (hydrochloride) in DMSO and water is approximately 50 and 100 mM, respectively. We do not recommend storing the aqueous solution for more than one day.

### Description

CP 99,994 is a nonpeptide neurokinin-1 ($NK_1$) receptor antagonist ($K_i$ = 0.25 nM in a radioligand binding assay).[1] It is selective for $NK_1$ over $NK_2$ and $NK_3$ receptors ($K_i$s = >10 µM for both) as well as dopamine $D_1$ and $D_2$, $\alpha_1$-, $\alpha_2$- and β-adrenergic, serotonin, histamine $H_1$, muscarinic and nicotinic acetylcholine, µ-opioid, glutamate, benzodiazepine, and γ-aminobutyric acid (GABA) receptors ($IC_{50}$s = >1 µM for all). *In vitro*, CP 99,994 inhibits excitation of guinea pig locus coeruleus cells induced by substance P (Item No. 24035; $IC_{50}$ = 25 nM). It inhibits increases in horizontal locomotor activity induced by the $NK_1$ agonist [$Sar^9$,$Met(O_2)^{11}$]-substance P in guinea pigs ($ID_{50}$ = 0.59 mg/kg). CP 99,994 inhibits aerosolized capsaicin-induced plasma extravasation in guinea pig lung ($ID_{50}$ = 4 mg/kg). It exhibits anti-emetic effects in ferret models of emesis induced by copper sulfate, loperamide, or cisplatin (Item No. 13119) when administered at doses of 0.3 and 1 mg/kg.[2]

### References


1. McLean, S., Ganong, A., Seymour, P.A., *et al.* Pharmacology of CP-99,994; a nonpeptide antagonist of the tachykinin neurokinin-1 receptor. *J. Pharmacol. Exp. Ther.* **267(1)**, 472-479 (1993).
2. Watson, J.W., Gonsalves, S.F., Fossa, A.A., *et al.* The anti-emetic effects of CP-99,994 in the ferret and the dog: Role of the $NK_1$ receptor. *Br. J. Pharmacol.* **115(1)**, 84-94 (1995).





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