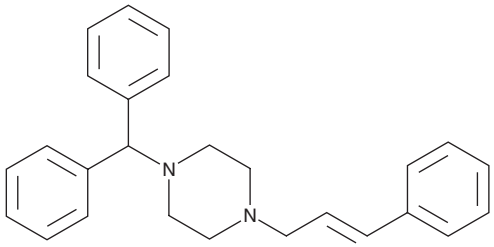
PRODUCT INFORMATION

Cinnarizine

Item No. 21001

CAS Registry No.:	298-57-7
Formal Name:	1-(diphenylmethyl)-4-(3-phenyl-2-propen-1-yl)-piperazine
MF:	$C_{26}H_{28}N_2$
FW:	368.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 227, 251 nm
Supplied as:	A crystalline solid
Storage:	22°C
Stability:	≥4 years



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

Laboratory Procedures

Cinnarizine is supplied as a crystalline solid. A stock solution may be made by dissolving the cinnarizine in the solvent of choice, which should be purged with an inert gas. Cinnarizine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cinnarizine in these solvents is approximately 3, 2, and 14 mg/ml, respectively.

Cinnarizine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cinnarizine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cinnarizine has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cinnarizine is a calcium channel inhibitor and histamine H_4 receptor antagonist (K_i = 142 nM).[1-3] It inhibits L- and T-type calcium channels in isolated guinea pig atrial cells in a voltage-dependent manner.[1] Cinnarizine inhibits L-type calcium currents in isolated guinea pig type II vestibular hair cells (IC_{50} = 1.5 µM). *In vivo*, cinnarizine (10 mg/kg) inhibits ethanol-induced gastric ulcer formation in rats.[4] Formulations containing cinnarizine have been used in the treatment of nausea and vomiting due to vertigo, Meniere's disease, or chemotherapy.

References

1. Cohen, C.J., Spires, S., and Van Skiver, D. Block of T-type Ca channels in guinea pig atrial cells by antiarrhythmic agents and Ca channel antagonists. *J. Gen. Physiol.* **100(4)**, 703-728 (1992).
2. Arab, S.F., Düwel, P., Jüngling, E., *et al.* Inhibition of voltage-gated calcium currents in type II vestibular hair cells by cinnarizine. *Naunyn Schmiedebergs Arch. Pharmacol.* **369(6)**, 570-575 (2004).
3. Nguyen, T., Shapiro, D.A., George, S.R., *et al.* Discovery of a novel member of the histamine receptor family. *Mol. Pharmacol.* **59(3)**, 427-433 (2001).
4. Lozeva, V., Marazova, K., and Belcheva, A. Gastric histamine content and ulcer formation in rats with ethanol-induced injury. Effects of cinnarizine and flunarizine. *Agents Actions* **41 Spec No**, C91-C92 (1994).

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