

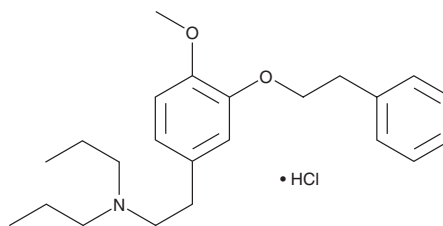
PRODUCT INFORMATION



NE 100

Item No. 19642

CAS Registry No.: 149409-57-4
Formal Name: 4-methoxy-3-(2-phenylethoxy)-N,N-dipropylbenzeneethanamine, monohydrochloride
MF: C₂₃H₃₃NO₂ • HCl
FW: 392.0
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 280 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

NE 100 is supplied as a crystalline solid. A stock solution may be made by dissolving the NE 100 in the solvent of choice, which should be purged with an inert gas. NE 100 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of NE 100 in these solvents is approximately 30 mg/ml.

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 NE 100 can be prepared by directly dissolving the crystalline solid in aqueous buffers. NE 100 is soluble in PBS (pH 7.2) at approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NE 100 is a potent antagonist of sigma-1 (σ_1) receptors (IC₅₀ = 4.16 nM).¹⁻³ It only weakly antagonizes dopamine, serotonin, and PCP receptors, but may indirectly alter receptor activity through its effects on σ_1 .¹⁻³ NE 100 is commonly used to study the role of σ_1 receptor signaling in cells or animals.^{4,5}

References

1. Chaki, S., Tanaka, M., Muramatsu, M., *et al.* NE-100, a novel potent sigma ligand, preferentially binds to sigma 1 binding sites in guinea pig brain. *Eur. J. Pharmacol.* **251**(1), R1-2 (1994).
2. Okuyama, S., Imagawa, Y., Ogawa, S., *et al.* NE-100, a novel sigma receptor ligand: *In vivo* tests. *Life Sci.* **53**(18), PL285-PL290 (1993).
3. Yamamoto, H., Yamamoto, T., Sagi, N., *et al.* NE-100, a novel sigma ligand: Effects on [3H]TCP binding to intact primary cultured neuronal cells. *Life Sci.* **56**(2), PL39-PL43 (1995).
4. Dalwadi, D.A., Kim, S., and Schetz, J.A. Activation of the sigma-1 receptor by haloperidol metabolites facilitates brain-derived neurotrophic factor secretion from human astroglia. *Neurochem. Int.* **105**(5), 27-31 (2017).
5. Hong, J., Sha, S., Zhou, L., *et al.* Sigma-1 receptor deficiency reduces MPTP-induced parkinsonism and death of dopaminergic neurons. *Cell Death Dis.* **6**, e1832 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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