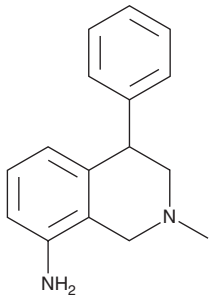
PRODUCT INFORMATION

Nomifensine

Item No. 29330

CAS Registry No.:	24526-64-5
Formal Name:	1,2,3,4-tetrahydro-2-methyl-4-phenyl-8-isoquinolinamine
Synonym:	(±)-Nomifensine
MF:	$C_{16}H_{18}N_2$
FW:	238.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 242 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

Nomifensine is supplied as a crystalline solid. A stock solution may be made by dissolving the nomifensine in the solvent of choice, which should be purged with an inert gas. Nomifensine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of nomifensine in ethanol is approximately 10 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 nomifensine can be prepared by directly dissolving the crystalline solid in aqueous buffers. Nomifensine is slightly soluble in PBS (pH 7.2).

Description

Nomifensine is an inhibitor of norepinephrine (NE) and dopamine (DA) reuptake.[1] It inhibits uptake of NE, DA, and serotonin (5-HT) in rat brain synaptosomes with IC_{50} values of 6.6, 48, and 830 nM, respectively. It is selective for DA, NE, and 5-HT uptake inhibition over binding to dopamine D_2, α_1- adrenergic-, 5-HT_2, and muscarinic receptors (IC_{50}s = 43,000, 1,200, 3,800, and >13,000 nM, respectively, in rat brain membranes). Nomifensine is selective for inhibition of NE over DA uptake *in vivo* with minimal inhibitory doses of 28 and less than 57 µmol/kg, respectively. It decreases the time Wistar Kyoto, but not Sprague-Dawley, rats spend immobile in the forced swim test but also increases locomotor activity in the open field test in Wistar Kyoto and Sprague-Dawley rats when administered at a chronic dose of 10 mg/kg.[2]

References

1. Hyttel, J. and Larsen, J.J. Neurochemical profile of Lu 19-005, a potent inhibitor of uptake of dopamine, noradrenaline, and serotonin. *J. Neurochem.* **44(5)**, 1615-1622 (1985).
2. Tejani-Butt, S., Kluczynski, J., and Paré, W.P. Strain-dependent modification of behavior following antidepressant treatment. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **27(1)**, 7-14 (2003).

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