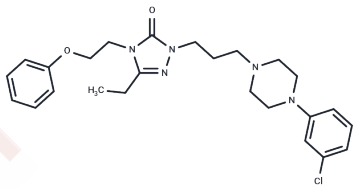
Data Sheet (Cat.No.T21451)

TargetMol

Nefazodone

Chemical Properties



CAS No. : 83366-66-9

Formula: C25H32ClN5O2

Molecular Weight: 470.01

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	Nefazodone (Nefadar) is an oral antidepressant that is an antagonist of postsynaptic 5-HT 2A receptor and 5-HT 2C receptor, and also inhibits the reuptake of norepinephrine, dopamine, and serotonin (SNDRI).
Targets(IC50)	5-HT Receptor,Norepinephrine,Cytochromes P450,Dopamine Receptor
In vitro	Nefazodone inhibited mitochondrial respiration in isolated rat liver mitochondria and in intact HepG2 cells, where this was accompanied by simultaneous acceleration of glycolysis. At the concentration of 200 μM over 24 hours, nefazodone depletes 100% of ATP in both glucose and galactose-grown HepG2 cells. At the concentrations of 6.25, 12.5, and 25 μM within 120 minutes, nefazodone suppresses oxygen consumption in HepG2 cells, indicating strong mitochondrial respiratory inhibition in HepG2 cells. [1]
In vivo	Nefazodone (10mg/kg/day, s.c) demonstrated immunoprotective effects in mice subjected to chronic auditory stress by partially reversing stress-induced reductions in thymus and spleen cellularity, peripheral T-lymphocyte levels, lymphocyte proliferative response to concanavalin A, and phagocytic activity (assessed via zymosan and carbon clearance tests). Nefazodone had no significant impact on these immune parameters in unstressed mice, indicating a selective protective role under stress conditions. [2]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble), DMSO: 125 mg/mL (265.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1276 mL	10.6381 mL	21.2761 mL
5 mM	0.4255 mL	2.1276 mL	4.2552 mL
10 mM	0.2128 mL	1.0638 mL	2.1276 mL
50 mM	0.0426 mL	0.2128 mL	0.4255 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dykens JA, Jamieson JD, Marroquin LD, Nadanaciva S, Xu JJ, Dunn MC, Smith AR, Will Y. In vitro assessment of mitochondrial dysfunction and cytotoxicity of nefazodone, trazodone, and buspirone. Toxicol Sci. 2008 Jun;103(2):335-45.

Freire-Garabal M, Varela M, Riveiro P, Balboa J, Liñares D, Mañá P, Mayán JM, Rey-Méndez M, Núñez MJ. Effects of nefazodone on the immune system of mice. Eur Neuropsychopharmacol. 2000 Jul;10(4):255-64.

DeVane CL, Grothe DR, Smith SL. Pharmacology of antidepressants: focus on nefazodone. J Clin Psychiatry. 2002; 63 Suppl 1:10-7. Review. PubMed PMID: 11890560.

Rotzinger S, Bourin M, Akimoto Y, Coutts RT, Baker GB. Metabolism of some "second"- and "fourth"-generation antidepressants: iprindole, viloxazine, bupropion, mianserin, maprotiline, trazodone, nefazodone, and venlafaxine. Cell Mol Neurobiol. 1999 Aug;19(4):427-42. Review. PubMed PMID: 10379419.