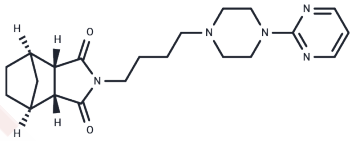
Data Sheet (Cat.No.TQ0315)

TargetMol

Tandospirone

Chemical Properties



CAS No. : 87760-53-0

Formula: C21H29N5O2

Molecular Weight: 383.49

Storage: Keep away from moisture,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Tandospirone (SM-3997) is a selective and potent 5-HT1A receptor partial agonist with anxiolytic and antidepressant activity that potentiates the anticardiac fibrotic effect of valsartan in spontaneously hypertensive rats, and can be used in the study of central nervous system disorders.
Targets(IC50)	5-HT Receptor
In vitro	Tandospirone has negligible effects at 5-HT1B receptors, 5-HT uptake sites, β-adrenergic receptors, muscarinic cholinergic receptors, and benzodiazepine receptors. [1]3H-Tandospirone rapidly binds to rat brain hippocampal membranes and achieves binding in a high-affinity, reversible, and saturating fashion (Kd: 9.4 nM, Bmax: 213 fmol/mg protein). [2]
In vivo	Chronic administration of Tandospirone (0.2 and 1.0 mg/kg/day, but not 2.0 mg/kg/day) was effective in alleviating elevated levels of eLAC in the anterior cingulate cortex (mPFC) due to foot shock stress. [3] After acute administration of Tandospirone (0, 0.1 and 1 mg/kg, intraperitoneally) to rats, a significant reduction in the number of premature responses in a dose-dependent manner was observed, an index used to assess impulsive behavior. [4]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble), DMSO: 15 mg/mL (39.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.22 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6076 mL	13.0381 mL	26.0763 mL
5 mM	0.5215 mL	2.6076 mL	5.2153 mL
10 mM	0.2608 mL	1.3038 mL	2.6076 mL
50 mM	0.0522 mL	0.2608 mL	0.5215 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

Hamik A, et al. Analysis of tandospirone (SM-3997) interactions with neurotransmitter receptor binding sites. Biol Psychiatry. 1990 Jul 15;28(2):99-109.
Shimizu H, et al. Characterization of the putative anxiolytic SM-3997 recognition sites in rat brain. Life Sci. 1988;42 (24):2419-27.
Uehara T, et al. Chronic treatment with tandospirone, a 5-HT1A receptor partial agonist, suppresses footshock stress-induced lactate production in the prefrontal cortex of rats. Pharmacol Biochem Behav. 2013 Nov 15;113:1-6.
Ohmura Y, et al. Tandospirone suppresses impulsive action by possible blockade of the 5-HT1A receptor. J Pharmacol Sci. 2013;122(2):84-92.