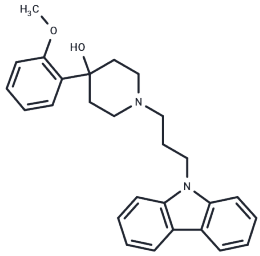
Data Sheet (Cat.No.T28183)

TargetMol

NNC 05-2090

Chemical Properties



CAS No. : 184845-43-0

Formula: C27H30N2O2

Molecular Weight: 414.54

Storage: Keep away from moisture
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	NNC 05-2090 is a GABA uptake inhibitor that exhibits moderate selectivity for BGT-1 transporters over other GABA transporter subtypes, while also displaying measurable affinity toward α1-adrenergic and D2-dopaminergic receptors, making NNC 05-2090 a multifunctional neuropharmacological tool for investigating inhibitory neurotransmission and transporter-receptor cross-regulation.
Targets(IC50)	GABA Receptor
In vitro	In rat synaptosomes, NNC 05-2090 inhibited GABA uptake with IC50 values of 4.4 μM (cortical) and 2.5 μM (collicular). Selectivity assays showed inhibition of GAT-1, GAT-2, and GAT-3 (IC50 22-45 μM), along with affinity for monoamine transporters (IC50 4-8 μM) and α1-adrenoceptors (IC50 266 nM) [1].
In vivo	In DBA/2 mice, intraperitoneal (i.p.) administration of NNC 05-2090 inhibits sound-induced tonic and clonic convulsions with ED50 values of 19 umol/kg and 26 umol/kg. In the Maximal Electroshock (MES) test, it antagonizes tonic hindlimb extension with an ED50 of 73 umol/kg. In amygdala-kindled rats, doses of 72-242 umol/kg reduce the severity of generalized seizures and shorten after-discharge duration. The compound also reverses mechanical allodynia in models of partial sciatic nerve ligation [1][2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4123 mL	12.0616 mL	24.1231 mL
5 mM	0.4825 mL	2.4123 mL	4.8246 mL
10 mM	0.2412 mL	1.2062 mL	2.4123 mL
50 mM	0.0482 mL	0.2412 mL	0.4825 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

Dalby NO, et al. Anticonvulsant properties of two GABA uptake inhibitors NNC 05-2045 and NNC 05-2090, not acting preferentially on GAT-1. Epilepsy Res. 1997 Jul;28(1):51-61.
C Thomsen, et al. 1-(3-(9H-carbazol-9-yl)-1-propyl)-4-(2-methoxyphenyl)-4-piperidinol, a novel subtype selective inhibitor of the mouse type II GABA-transporter. Br J Pharmacol. 1997 Mar;120(6):983-5.