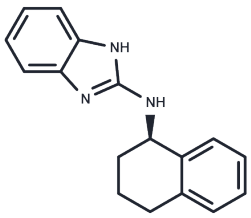
Data Sheet (Cat.No.T12256)

TargetMol

NS8593 hydrochloride

Chemical Properties



CAS No. : 875755-24-1

Formula: C17H18ClN3

Molecular Weight: 299.8

Storage: 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	NS8593 hydrochloride (NS8593 HCl) is a potent and selective inhibitor of small conductance Ca2+-activated K+ channels (SK channels) .
Targets(IC50)	Potassium Channel
In vitro	It is found that tested in excised patches, the inhibition by NS8593 (compound 14) decreased as the intracellular [Ca2+] is increased and that NS8593 is equipotent when applied from either the intracellular or the extracellular side of the cell membrane.?A HEK293 cell transiently transfected with hSK3 channels is inhibited by 80% upon application of 100 nM apamin and by 75% after application of 300 nM NS8593.
In vivo	NS8593 is able to affect firing pattern and firing rate?of dopaminergic neurons in vivo in C57Bl/6 mice[1].

Solubility Information

Solubility	DMSO: 25 mg/mL (83.39 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2.5 mg/mL (8.34 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (11.01 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	3.3356 mL	16.6778 mL	33.3556 mL
5 mM	0.6671 mL	3.3356 mL	6.6711 mL
10 mM	0.3336 mL	1.6678 mL	3.3356 mL
50 mM	0.0667 mL	0.3336 mL	0.6671 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

Sørensen US, et al. Synthesis and structure-activity relationship studies of 2-(N-substituted)-aminobenzimidazoles as potent negative gating modulators ofsmall conductance Ca2+-activated K+ channels. J Med Chem. 2008 Dec 11; 51(23):7625-34.

Strøbaek D, et al. Inhibitory gating modulation of small conductance Ca2+-activated K+ channels by the synthetic compound (R)-N-(benzimidazol-2-yl)-1,2,3,4-tetrahydro-1-naphtylamine (NS8593) reduces afterhyperpolarizing current in hippocampal CA1 neurons. Mol Pharmacol. 2006 Nov;70(5):1771-82.