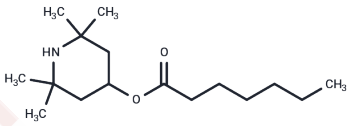
Data Sheet (Cat.No.T60080)

TMPH

Chemical Properties



CAS No. : 849461-90-1

Formula: C16H31NO2

Molecular Weight: 269.42

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	TMPH is an inhibitor of nAChR and inhibits nAChRs lacking α5, α6, or β3 subunits. TMPH can be used in studies about nAChR dysfunction or neurological disorders.
Targets(IC50)	AChR
In vitro	TMPH (100 nM) inhibits nAChR with an inhibition rate of 90% in Xenopus oocytes and suppresses AChR subtypes with IC50s of 1.0-390 nM[1].
In vivo	In the nicotine-induced mice model, nAChR-IN-1 (20 mg/kg; s.c.) increases locomotor activity without effects on body temperature. In the tail-flick and hot-plate mice model, nAChR-IN-1(0, 0.1, 1, 5 mg/kg; s.c.) blocks the antinociceptive effect of nicotine in the hot-plate and blocks antinociception in a time-dependent manner[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (185.58 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 (7.42 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	3.7117 mL	18.5584 mL	37.1168 mL
5 mM	0.7423 mL	3.7117 mL	7.4234 mL
10 mM	0.3712 mL	1.8558 mL	3.7117 mL
50 mM	0.0742 mL	0.3712 mL	0.7423 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

Papke RL, et, al. Compositions et methodes d'inhibition selective des recepteurs nicotiniques de l'acetylcholine. WO2005032479A2