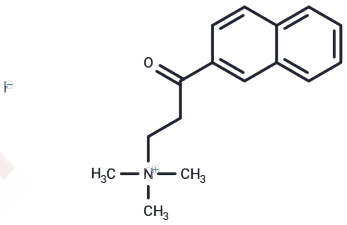
Data Sheet (Cat.No.T14194)

TargetMol

β-NETA

Chemical Properties



CAS No. : 31059-54-8

Formula: C16H20INO

Molecular Weight: 369.24

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	β-NETA (α-NETA) is a stable, noncompetitive, slowly reversible choline acetyltransferase (ChAT) inhibitor with an IC50 of 9 μM and is a potent chemokine-like receptor-1 (CMKLR1) antagonist. β-NETA has anti-cancer activity[1][2]. β-NETA weakly inhibits cholinesterase (IC50=84 μM) and acetylcholinesterase (IC50=300 μM).
Targets(IC50)	Apoptosis,Cholinesterase (ChE)
In vitro	a-NETA treatment increases EOC cell expression of pyroptosis-associated proteins[3]. a-NETA (50-150 nM; 24 hours) decreases all cell lines viability in a dose-dependent manner [3]. a-NETA (2.5-10.0 μg/mL; 24 hours) leads to epithelial ovarian cancer (EOC) cell death associated with membrane blistering and cytoplasm leakage[3].
In vivo	a-NETA (s.c. injection; 3 mg/kg or 10 mg/kg; daily; for 30 days) significantly delays the onset of EAE with 3 mg/kg, and completely suppresses clinical signs for an average of nine days with 10 mg/kg beyond the first appearance of disease in control female C57BL/6 mice[2]. a-NETA (injected intraperitoneally; 0.125 mg/kg; once every other day for 20 days) significantly decreases tumor volume and tumor weight[3].

Solubility Information

Solubility	DMSO: 31.25 mg/mL (84.63 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 (5.42 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	2.7083 mL	13.5413 mL	27.0827 mL
5 mM	0.5417 mL	2.7083 mL	5.4165 mL
10 mM	0.2708 mL	1.3541 mL	2.7083 mL
50 mM	0.0542 mL	0.2708 mL	0.5417 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

Sastry BV, et al. Relationships between chemical structure and inhibition of choline acetyltransferase by 2-(alpha-naphthoyl)ethyltrimethylammonium and related compounds. Pharmacol Res Commun. 1988 Sep;20(9):751-71.
Graham KL, et al. A novel CMKLR1 small molecule antagonist suppresses CNS autoimmune inflammatory disease. PLoS One. 2014 Dec 1;9(12):e112925.
Qiao L, et al. α-NETA induces pyroptosis of epithelial ovarian cancer cells through the GSDMD/caspase-4 pathway. FASEB J. 2019 Nov;33(11):12760-12767.