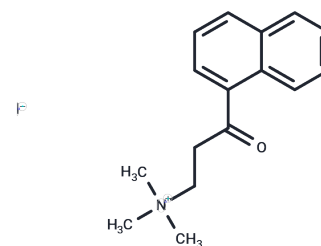


α-NETA

Chemical Properties

CAS No. : 115066-04-1
Formula: C₁₆H₂₀INO
Molecular Weight: 369.246
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	α-NETA is a potent and noncompetitive choline acetyltransferase (ChA) inhibitor with an IC ₅₀ of 9 μM. α-NETA is a potent ALDH1A1 (IC ₅₀ = 0.04 μM) and chemokine-like receptor-1 (CMKLR1) antagonist. α-NETA weakly inhibits cholinesterase (ChE; IC ₅₀ = 84 μM) and acetylcholinesterase (AChE; IC ₅₀ = 300 μM). α-NETA has anti-cancer activity [1] [2].
In vitro	α-NETA (50-150 nM; 24 hours) decreases all cell lines viability in a dose-dependent manner [3]. α-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]. α-NETA treatment increases EOC cell expression of pyroptosis-associated proteins [3]. α-NETA is most potent in inhibiting aldehyde dehydrogenase 1 family, member A1 (ALDH1A1; IC ₅₀ = 0.04 μM; purified enzymes assay), followed by CMKLR1 (IC ₅₀ = 0.375 μM for β-ARR2 recruitment; Cell-based assay) and G9a histone lysine methyltransferase (IC ₅₀ = 0.50 μM; purified enzymes assay). α-NETA selectively inhibits chemerin-stimulated CMKLR1 association with β-arrestin2 [2]. α-NETA possesses fluorescent characteristics (excitation spectrum: maxima 255 and 297 nm; emission spectrum: maximum 437 nm) of naphthyl moiety [1]. Cell Viability Assay [3] Cell Line: Ho8910, Ho8910PM, A2780, and Iose80 cells Concentration: 50, 100, 150 nM Incubation Time: 24 hours Result: Decreased all cell lines viability in a dose-dependent manner. Apoptosis Analysis [3] Cell Line: Epithelial ovarian cancer (EOC) cell Concentration: 2.5, 7.5, 10.0 μg/mL Incubation Time: 24 hours Result: Led to EOC cell death associated with membrane blistering and cytoplasm leakage.
In vivo	Administration of α-NETA (intraperitoneally, i.p.; 0.125 mg/kg; once every other day over a span of 20 days) significantly reduced both the volume and weight of tumors in BALB/c nude mice with SKOV3 cells [3]. When injected subcutaneously (s.c.; at doses of 3 mg/kg or 10 mg/kg; daily for 30 days), α-NETA markedly delayed the onset of Experimental Autoimmune Encephalomyelitis (EAE) at a dosage of 3 mg/kg, and at 10 mg/kg, it completely halted the clinical symptoms for an average duration of nine days following the initial disease manifestation in control female C57BL/6 mice [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7082 mL	13.541 mL	27.0819 mL
5 mM	0.5416 mL	2.7082 mL	5.4164 mL
10 mM	0.2708 mL	1.3541 mL	2.7082 mL
50 mM	0.0542 mL	0.2708 mL	0.5416 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

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