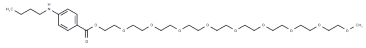
Data Sheet (Cat.No.T19644)

TargetMol

Benzonatate

Chemical Properties



CAS No. : 104-31-4

Formula: C30H53NO11

Molecular Weight: 603.74

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	Benzonatate is an antagonist of sodium channel protein.
Targets(IC50)	Sodium Channel
In vivo	Na(+) currents are inhibited most potently by a benzonatate fraction containing the 9-ethoxy component.?Detectable effects of benzonatate occur at concentrations as low as 0.3 μM, which has been reported in humans. benzonatate has local anesthetic-like effects on voltage-gated sodium channels, including Nav1.7, which is a possible mechanism for cough suppression by the drug.

Solubility Information

Solubility	DMSO: 55 mg/mL (91.1 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 (3.31 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	1.6563 mL	8.2817 mL	16.5634 mL
5 mM	0.3313 mL	1.6563 mL	3.3127 mL
10 mM	0.1656 mL	0.8282 mL	1.6563 mL
50 mM	0.0331 mL	0.1656 mL	0.3313 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

Evans M S , Maglinger G B , Fletcher A M , et al. Benzonatate inhibition of voltage-gated sodium currents[J]. Neuropharmacology, 2016, 101:179.

Zhao L, Sun X, Hou C, et al.CPNE7 promotes colorectal tumorigenesis by interacting with NONO to initiate ZFP42 transcription.Cell Death & Disease.2024, 15(12): 896.