Data Sheet (Cat.No.T10024)

TargetMol

1-Octanol

Chemical Properties

CAS No. : 111-87-5

Formula: C8H18O

Molecular Weight: 130.23

Appearance: no data available

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	1-Octanol, a saturated fatty alcohol, functions as an inhibitor of T-type calcium channels (T-channels), showing an inhibitory concentration (IC50) of 4 μM for native T-currents[1]. Additionally, 1-Octanol is recognized for its potential as a biofuel, possessing diesel-like properties[2].
Targets(IC50)	Calcium Channel,Endogenous Metabolite
In vitro	1-octanol inhibits native T-currents at subanesthetic concentrations with an IC50 of approximately 4 μM, yet it is up to 30-fold less potent in inhibiting recombinant CaV3.3 T-channels heterologously expressed in human embryonic kidney cells [1].

Solubility Information

Solubility	DMSO: 50 mg/mL (383.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.6787 mL	38.3936 mL	76.7872 mL
5 mM	1.5357 mL	7.6787 mL	15.3574 mL
10 mM	0.7679 mL	3.8394 mL	7.6787 mL
50 mM	0.1536 mL	0.7679 mL	1.5357 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.

Reference

Joksovic PM, et al. Mechanisms of inhibition of T-type calcium current in the reticular thalamic neurons by 1-octanol: implication of the protein kinase C pathway. Mol Pharmacol. 2010 Jan;77(1):87-94.

Akhtar MK, et al. Microbial production of 1-octanol: A naturally excreted biofuel with diesel-like properties. Metab Eng Commun. 2014 Nov 13;2:1-5.

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