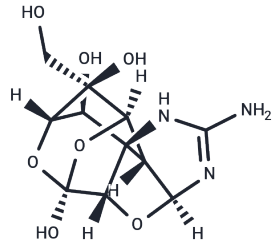
Data Sheet (Cat.No.T37093)

TargetMol

4,9-Anhydrotetrodotoxin

Chemical Properties



CAS No. : 13072-89-4

Formula: C11H15N3O7

Molecular Weight: 301.25

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	4,9-Anhydrotetrodotoxin (4,9-anhydro-TTX) is a derivative of TTX that selectively blocks inward sodium current through Nav1.6 voltage-activated sodium channels (IC50 = 7.8 nM in Xenopus oocytes). [1][2][3] It demonstrates IC50 values of 1.3, 0.34, 0.99, 78.5, 1.3, and >30 μM for Nav1.2, Nav1.3, Nav1.4, Nav1.5, Nav1.7, and Nav1.8, respectively.[1]
Targets(IC50)	Others,Sodium Channel

Solubility Information

Solubility	H2O: 1 mg/mL (3.32 mM),Sonication is recommended. Ethanol: 5 mg/mL (16.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3195 mL	16.5975 mL	33.195 mL
5 mM	0.6639 mL	3.3195 mL	6.639 mL
10 mM	0.332 mL	1.6598 mL	3.3195 mL
50 mM	0.0664 mL	0.332 mL	0.6639 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

Rosker, C., Lohberger, B., Hofer, D., et al. The TTX metabolite 4,9-anhydro-TTX is a highly specific blocker of the Nav1.6 voltage-dependent sodium channel. American Journal of Physiology.Cell Physiology 293(2), C783-C789 (2007).

Teramoto, N., and Yotsu-Yamashita, M. Selective blocking effects of 4,9-anhydrotetrodotoxin, purified from a crude mixture of tetrodotoxin analogues, on NaV1.6 channels and its chemical aspects. Mar.Drugs 13(2), 984-995 (2015).

Moczydlowski, E.G. The molecular mystique of tetrodotoxin. Toxicon 63, 165-183 (2013).