

Product Name: 4,9-Anhydrotetrodotoxin

Catalog No.: 6159

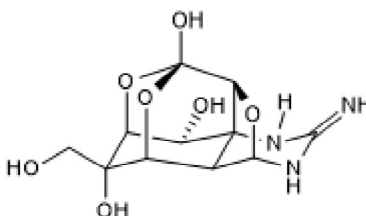
Batch No.: 5

CAS Number: 13072-89-4

IUPAC Name: (4*S*,5*aS*,6*S*,8*R*,9*S*,10*S*,11*S*,11*aR*,12*R*)-2-Amino-1,4,5*a*,6,8,9,10,11-octahydro-9-(hydroxymethyl)-6,10-epoxy-4,8,11*a*-metheno-11*aH*-oxocino[4,3-*f*][1,3,5]oxadiazepine-6,9,11-triol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₁ H ₁₅ N ₃ O ₇
Batch Molecular Weight:	301.25
Physical Appearance:	film
Solubility:	water to 1 mg/ml
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows >98 % purity
Mass Spectrum:	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

4,9-Anhydrotetrodotoxin is a potent and selective Na_v1.6 channel blocker (IC₅₀ values are 7.8, 341, 988, 1260, 1270, 78500 and >30000 nM for Na_v1.6, Na_v1.3, Na_v1.4, Na_v1.2, Na_v1.7, Na_v1.5 and Na_v1.8). Derivative of tetrodotoxin (Cat. No. 1078).

Physical and Chemical Properties:

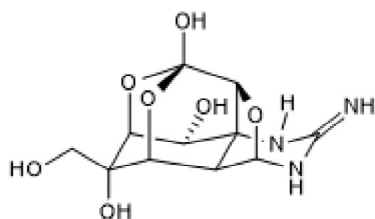
Batch Molecular Formula: C₁₁H₁₅N₃O₇

Batch Molecular Weight: 301.25

Physical Appearance: film

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 1 mg/ml

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hargus et al (2013) Evidence for a role of Na_v1.6 in facilitating increases in neuronal hyperexcitability during epileptogenesis J.Neurophysiol **110** 1144. PMID: 23741036.

Rosker et al (2007) The TTX metabolite 4,9-anhydro-TTX is a highly specific blocker of the Na_v1.6 voltage-dependent sodium channel. Am.J.Physiol.Cell Physiol. **293** C783. PMID: 17522141.

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