

**Product Name:** 4,9-Anhydrotetrodotoxin

**Catalog No.:** 6159

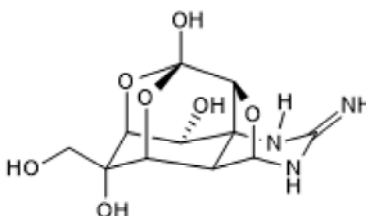
**Batch No.:** 4

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<sub>11</sub>H<sub>15</sub>N<sub>3</sub>O<sub>7</sub>  
**Batch Molecular Weight:** 301.25  
**Physical Appearance:** Clear 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<sub>v</sub>1.6 channel blocker (IC<sub>50</sub> values are 7.8, 341, 988, 1260, 1270, 78500 and >30000 nM for Na<sub>v</sub>1.6, Na<sub>v</sub>1.3, Na<sub>v</sub>1.4, Na<sub>v</sub>1.2, Na<sub>v</sub>1.7, Na<sub>v</sub>1.5 and Na<sub>v</sub>1.8). Derivative of tetrodotoxin (Cat. No. 1078).

**Physical and Chemical Properties:**

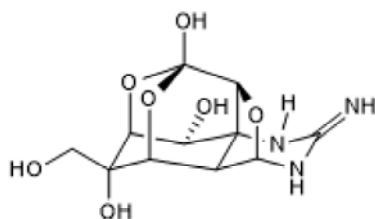
Batch Molecular Formula: C<sub>11</sub>H<sub>15</sub>N<sub>3</sub>O<sub>7</sub>

Batch Molecular Weight: 301.25

Physical Appearance: Clear film

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 1 mg/ml

This product is supplied as a lyophilized solid and may 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. Our standard recommendations are:

**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<sub>v</sub>1.6 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<sub>v</sub>1.6 voltage-dependent sodium channel. Am.J.Physiol.Cell Physiol. **293** C783. PMID: 17522141.

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