

# Tetrodotoxin

Catalog No: tcsc3772



## Available Sizes

Size: 1mg



## Specifications

### CAS No:

4368-28-9

### Formula:

$C_{11}H_{17}N_3O_8$

### Pathway:

Membrane Transporter/Ion Channel

### Target:

Sodium Channel

### Purity / Grade:

>98%

### Solubility:

DMSO

### Alternative Names:

TTx

### Observed Molecular Weight:

319.27

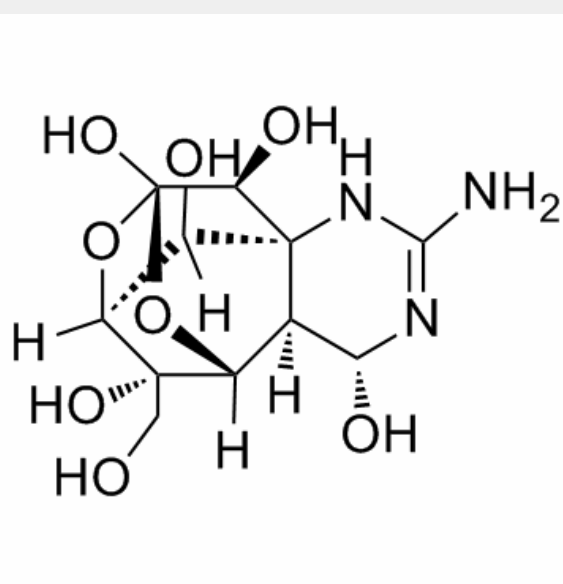
## Product Description

Tetrodotoxin is a highly selective **sodium channel** blocker, with **IC<sub>50</sub>** of 33 nM for **Nav1.6**.

IC50 & Target: Sodium channel<sup>[1]</sup>

IC<sub>50</sub>: 33 nM (Nav1.6)<sup>[2]</sup>

***In Vitro:*** The sodium channel (Nav) gene family is classified into Tetrodotoxin-sensitive (TTX-S; Nav1.1, Nav1.2, Nav1.3, Nav1.4, Nav1.6, and Nav1.7) and TTX-resistant (TTX-R) channels (Nav1.5, Nav1.8, and Nav1.9), each of which is associated with specific therapeutic indications based on their expression pattern, function, and genetic mutations. More than 97% of macroscopic Nav current in ND7-23 cells is carried by Tetrodotoxin-sensitive channels (300 nM TTX) and that Nav1.7 is the predominant channel contributing to this response (65% of peak inward current), followed by Nav1.6 (~20%) and negligible Nav1.3 currents (~2%). In addition, Tetrodotoxin (TTX) is selective for the Nav1.6 (IC<sub>50</sub> of 33 nM) and 50-fold over Nav1.7 in human Nav channels expressed in mammalian cells, confirming previous studies of rodent Nav channels expressed in oocytes and HEK cells<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!