

Tetrodotoxin (citrate)

Catalog No: tcsc3773



Available Sizes

Size: 1mg



Specifications

CAS No:

18660-81-6

Formula:

$C_{17}H_{25}N_3O_{15}$

Pathway:

Membrane Transporter/Ion Channel

Target:

Sodium Channel

Purity / Grade:

>98%

Solubility:

DMSO

Alternative Names:

TTx citrate

Observed Molecular Weight:

511.39

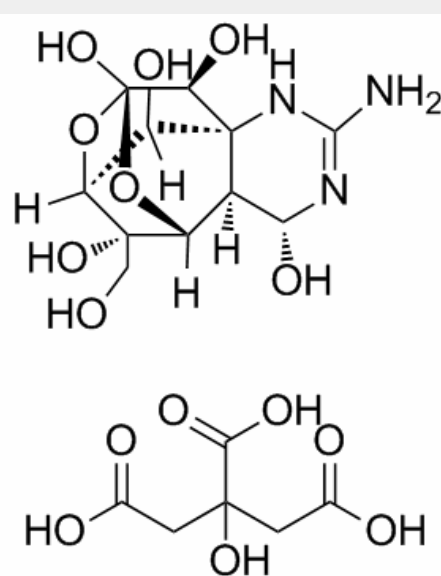
Product Description

Tetrodotoxin citrate is a highly selective **sodium channel** blocker, with **IC₅₀** of 33 nM for **Nav1.6**.

IC50 & Target: sodium channel^[1]

IC₅₀: 33 nM (Nav1.6)^[2]

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 (IC₅₀ 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^[2].



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