Product datasheet

Tetrodotoxin ab120054

Overview

Product name: Tetrodotoxin
Description: Na⁺ channel blocker
Biological description: Potent, selective and reversible, use-dependent inhibitor of voltage-dependent Na⁺ channels.
Purity: > 98%
General notes: To purchase this product, additional information may be required for security reasons. Please contact customer services for further details.

Properties

Chemical name: Octahydro-12-(hydroxymethyl)-2-imino-5,9,7,10a-dimethano-10aH-[1,3]dioxocino[6,5-d]pyrimidine-4,7,10,11,12-pentol
Molecular weight: 319.27
Chemical structure:

Molecular formula: C₁₁H₁₇N₃O₈
CAS Number: 4368-28-9
Storage instructions: Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview: Soluble in pH 4.8 citrate buffer to 100 mM
Handling: Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be usable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.
Toxic, refer to SDS for further information.
Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

SMILES: O[C@H]3C14NC(=N)[N[C@H](O)[C@@H]4C2O[C@]3(O)O[C@H](C1O)C2(O)CO
TTX blocked the ictal discharge in both field A and B neurons, but not the direct response of field A neurons to a double NMDA pulse (black arrowheads).

Multiple connections between CA3 and CA1 pyramidal cells and GABAergic cells and CA1 pyramidal cells in young adult rats. (A1) A typical recording at -80 mV from a pyramidal cell, upper trace shows AMPA sEPSCs under control conditions and lower trace shows mEPSCs after wash-in of TTX. (A2) TTX reduces the AMPA EPSC amplitude by 5.9 ± 0.8 pA (P = 0.004, n = 8, two-tailed paired t-test). (A3) TTX reduces AMPA EPSC frequency by 1.5 ± 0.4 Hz (P < 0.001, n = 8, one-tailed paired t-test). (A4) The average multiplicity was 1.7 ± 0.1 (P < 0.001, n = 8, one-tailed one-sample t-test with test value = 1). (B1) A typical recording at 0 mV from a pyramidal cell, upper trace shows GABA sIPSCs under control conditions and lower trace shows mIPSCs after wash-in of TTX. (B2) TTX reduces the GABA IPSC amplitude by 8.4 ± 2.7 pA (P = 0.03, n = 6, two-tailed paired t-test). (B3) TTX reduces GABA IPSC frequency by 3.2 ± 0.8 Hz (P = 0.005, n = 6, one-tailed paired t-test). (B4) The average multiplicity was 2.4 ± 0.4 (P = 0.007, n = 6, one-tailed one-sample t-test with test value = 1). Black filled circles show mean ± SEM and green filled circles show data from individual experiments. Asterisks denote the level of significance as follows: *: P < 0.05, **: P < 0.01, ***: P < 0.001.
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If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions
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