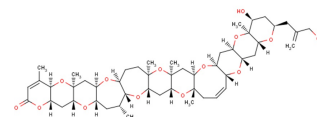


Brevetoxin-3

Chemical Properties

| | |
|-------------------|--|
| CAS No.: | 85079-48-7 |
| Formula: | C50H72O14 |
| Molecular Weight: | 897.1 |
| Appearance: | N/A |
| Storage: | 0-4°C for short term (days to weeks), or -20°C for long term (months). |



Biological Description

| | |
|----------------------------|--|
| Description | Brevetoxin-3 (PbTx-3) is a potent allosteric voltage-gated Na ⁺ channel activator. Brevetoxin-3 has a high affinity to site 5 of the voltage-sensitive Na ⁺ channels, inhibits the inactivation of Na ⁺ channels. |
| Targets(IC ₅₀) | voltage-gated Na ⁺ channel: None |
| In vitro | Brevetoxin-3 (30-500 nM) produces a shift in activation to more negative membrane potentials whereby single-channel activity is observed under steady-state conditions (maintained depolarization at -50 mV) [1]. |
| In vivo | Brevetoxin-3 (intratracheal instillation; 2.8 µg/kg; gestational days 15-18) radioactivity is detected in placentas and fetuses within 0.5 hours. Concentrations of brevetoxin equivalents in fetuses are approximately 0.3 ng/g throughout the 48-h post-dosing, resulting in a calculated dose to fetuses of 19 ng/gh [3]. |

Solubility Information

| | |
|------------|---|
| Solubility | < 1 mg/ml refers to the product slightly soluble or insoluble |
|------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|----------|----------|-----------|
| 1 mM | 1.115 mL | 5.574 mL | 11.147 mL |
| 5 mM | 0.223 mL | 1.115 mL | 2.229 mL |
| 10 mM | 0.111 mL | 0.557 mL | 1.115 mL |
| 50 mM | 0.022 mL | 0.111 mL | 0.223 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Jeglitsch G, et al. Brevetoxin-3 (PbTx-3) and its derivatives modulate single tetrodotoxin-sensitive sodium channels in rat sensory neurons. *J Pharmacol Exp Ther*. 1998 Feb;284(2):516-25.
2. Zaias J, et al. Repeated exposure to aerosolized brevetoxin-3 induces prolonged airway hyperresponsiveness and lung inflammation in sheep. *Inhal Toxicol*. 2011 Mar;23(4):205-11.
3. Benson JM, et al. Placental transport of brevetoxin-3 in CD-1 mice. *Toxicol*. 2006 Dec 15;48(8):1018-26. Epub 2006 Aug 18.

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