

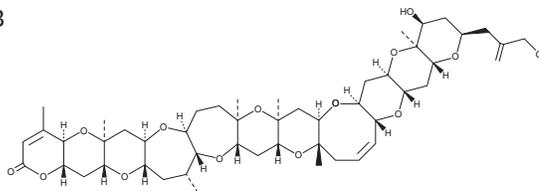
PRODUCT INFORMATION



Brevetoxin 3

Item No. 34801

CAS Registry No.: 85079-48-7
Formal Name: 42-deoxo-42-hydroxy-brevetoxin B
Synonyms: PbTx-3, T-17 Toxin
MF: C₅₀H₇₂O₁₄
FW: 897.1
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Brevetoxin 3 is supplied as a solid. A stock solution may be made by dissolving the brevetoxin 3 in the solvent of choice, which should be purged with an inert gas. Brevetoxin 3 is soluble in ethanol, methanol, and DMSO.

Description

Brevetoxin 3 is a neurotoxin produced by the dinoflagellate *K. brevis*.^{1,2} It binds to site 5 of voltage-gated sodium channels (Na_vs), prolonging the mean open time and inhibiting inactivation of these channels.² Brevetoxin 3 induces the release of lactate dehydrogenase (LDH), L-glutamate, and L-aspartate from primary rat cerebellar granule neurons (CGNs; EC₅₀s = 30.9, 45.3, and 50.2 nM, respectively).³ It induces convulsions in, and is lethal to (LD₅₀ = 4 ng/egg), Japanese rice fish embryos.¹ Brevetoxin 3 has been found in water samples collected during red tide blooms.⁴

References

1. Colman, J.R. and Ramsdell, J.S. The type B brevetoxin (PbTx-3) adversely affects development, cardiovascular function, and survival in medaka (*Oryzias latipes*) embryos. *Environ. Health Perspect.* **111(16)**, 1920-1925 (2003).
2. Jeglitsch, G., Rein, K.S., Baden, D.G., *et al.* Brevetoxin-3 (PbTx-3) and its derivatives modulate single tetrodotoxin-sensitive sodium channels in rat sensory neurons. *J. Pharmacol. Exp. Ther.* **284(2)**, 516-525 (1997).
3. Berman, F.W. and Murray, T.F. Brevetoxins cause acute excitotoxicity in primary cultures of rat cerebellar granule neurons. *J. Pharmacol. Exp. Ther.* **290(1)**, 439-444 (1999).
4. Pierce, R.H. and Henry, M.S. Harmful algal toxins of the Florida red tide (*Karenia brevis*): Natural chemical stressors in South Florida coastal ecosystems. *Ecotoxicology* **17(7)**, 623-631 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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