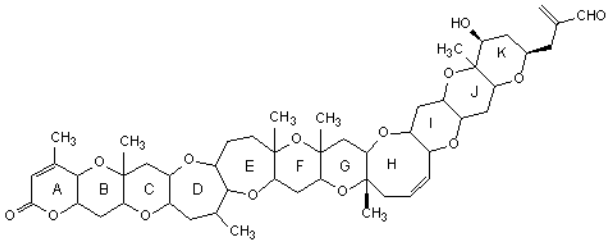
FT-673030

Brevetoxins PbTx

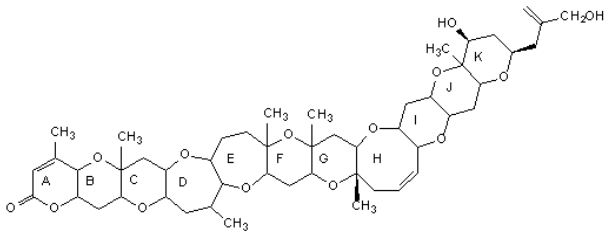
Description

activators of voltage-sensitive Na+ channels.

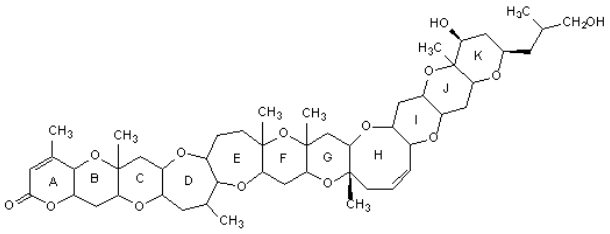
Catalog #: 673030, 100µg
Name: **Brevetoxin PbTx-2**
from the microorganism *Ptychodiscus brevis.*
$C_{50}H_{70}O_{14}$, MW: 895.09Da
CAS [79580-28-2]
Melting Point : 265-270 °C.
Purity min. : 95 % (HPLC).
Packaging: crystalline solid in sealed ampoule under vacuum.
Soluble in: acetone, ethyl acetate, methanol, ethanol, water.
Biological Activity: LC50: 16-25 nM *Gambusia affinis* bioassay).



Catalog #: 673500, 100µg
Name: **Brevetoxin PbTx-3**
from the microorganism Ptychodiscus brevis.
$C_{50}H_{72}O_{14}$, MW: 897.12 Da
CAS [85079-48-7]
Melting Point : 291-293 °C. (decomp.)
Purity min. : 95 % (HPLC).
Packaging: crystalline solid in sealed ampoule under vacuum.
Soluble in: acetone, ethyl acetate, methanol, ethanol, water.



Catalog #: 675080, 100µg
Name: **Brevetoxin PbTx-9**
from the microorganism *Ptychodiscus brevis.*
$C_{50}H_{74}O_{14}$, MW: 899.12 Da
CAS [142353-09-1]
Melting Point : 289-293 °C. (decomp.)
Purity min. : 95 % (HPLC).
Packaging: crystalline solid in sealed ampoule under vacuum.
Soluble in: acetone, ethyl acetate, methanol, ethanol, water.
Biological Activity: LC50: 35 nM (*Gambusia affinis* bioassay).



Storage: –20°C >1 year. (M)

Technical and Scientific Information

Brevetoxins (PbTx) are cyclic polyether compounds produced naturally by dinoflagellate (*Karenia brevis*). Brevetoxins are neurotoxins that bind to voltage-gated sodium channels in nerve cells, leading to disruption of normal neurological processes and causing the illness clinically described as neurotoxic shellfish poisoning (NSP)

Storage recommendations

Brevetoxins are unusually stable materials in the dry state under vacuum. It is recommended that PbTx be stored at -20°C in its original unopened vial until use. Once opened, PbTx should be dissolved in an appropriate solvent like acetone, acetonitrile, alcohol or ethyl acetate for preparation of stock solutions. Use of Dimethyl sufoxide (DMSO) is specifically discouraged because of its ability to carry toxic materials across membranes.
PbTx is stable in solvents, including water, where half-lives for active material range from 4-6 months. Stock solutions may be stored in a dry argon or nitrogen atmosphere in solution, or aliquots may be prepared from the stock solution and dispensed into individual vials for resealing under vacuum if desired. Unopened vials of Brevetoxins are stable at freezer temperatures for a minimum of 6 months.

Reconstitution :

Small quantities (ng) can be added to culture medium (e.g. ng PbTx/ml) for experiments. In methanol or ethanol solution, the compound is stable for over one year if stored at -18°C

Bibliography :

Shimizu et al., J. Am. Chem. Soc.(1986) 108:514 (PbTx-2, -3)
Trainer et al., ACS, Symposium series(1990) 418:166 (PbTx-2, -3)
Lin et al., J. Am. Chem. Soc. (1981). 103:6773 (PbTx-2)
Trainer VL., et al. ACS Symposium Series (1990). 418:166 (PbTx-9)
Schulman L., et al,. Toxic Marine Phytoplankton, Elsevier Science Publishers, (1990). pp. 407 (PbTx-9)

Other Bioactive compounds:

▪ **Neurotoxins**: α-Bungarotoxin (α7 subtype-selective nAChR antagonist); ω-Conotoxin GVIA (Ca2+ channel blocker (N-type)); ω-Conotoxin MVIIC (Ca2+ channel blocker (N, P and Q-type)); DSP-4 (Adrenergic neurotoxin); 6-Hydroxydopamine hydrobromide (Selective catecholaminergic neurotoxin); β-Pompilidotoxin (Slows neuronal Na+ channel inactivation); Veratridine (Voltage-gated Na+ channel opener)
▪ **BioActive compounds search**[], i.e. Na+-Cl~ symporter agonists (Chlortalidone 221055); Trk Receptor Agonists (LM22A4 673030)

Other Information

For in vitro R&D use only

Please contact InterBioTech – Interchim for any other information

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