

# Marine Toxins

## Brevetoxins:

Brevetoxins are known to bind to site 5 of voltage-gated sodium channels in nerve cells, leading to channel activation. This leads to disruption of normal neurological processes and causes the illness clinically described as neurotoxic shellfish poisoning (NSP).

B6916 Brevetoxin 1 (PbTx-1)  
B6918 Brevetoxin 3 (PbTx-3)  
B7017 Brevetoxin 7 (PbTx-7)  
B7116 Brevetoxin 10 PbTx-10)  
B7118 Brevetoxin 3-42-carboxylic acid (PbTx 3-42-COOH)

B6917 Brevetoxin 2 (PbTx-2)  
B7016 Brevetoxin 6 (PbTx-6)  
B7019 Brevetoxin 9 (PbTx-9)  
B7119 Beta-Naphtoyl brevetoxin

## Cyanopeptolins:

Cyanopeptolins are cyclic non-ribosomal peptides isolated from various cyanobacteria.

C9600 Cyanopeptolin 1007  
C9602 Cyanopeptolin 1041

## Okadaic Acids:

Okadaic acid is a polyether from the dinoflagellate *Prorocentrum lima* that is the causative agent of diarrhetic shellfish poisoning (DSP). Okadaic acid acts as a non-phorbol ester type tumor promoter and as an inhibitor of protein phosphatases PP1 and PP2A. The C8 diol ester of okadaic acid is itself a fragment of a precursor to okadaic acid produced by *Prorocentrum lima*. Although esters of okadaic acid are inactive in vitro against protein phosphatases, the diol ester of okadaic acid remains a potent toxin to whole cells suggesting transport across the cell membrane and cleavage of the ester bond by cellular esterases.

O4101 Okadaic acid  
O4200 Okadaic acid C8 diol ester  
O4204 Okadaol  
D7992 DTX-4

O4102 Okadaic acid, ammonium salt  
O4202 Okadaic acid methyl ester  
O4104 Okadaic acid, sodium salt

## Microginins:

A class of small, linear, non-ribosomal peptide toxins.

M3208 Microginin 527  
M3212 Microginin 704  
M3312 Microginin 690 Methyl ester

M3210 Microginin 690  
M3308 Microginin 527 methyl ester

## Microcystins:

Cyclic hybrid non-ribosomal peptides.

M3408 Microcystin LR, desmethyl  
M3410 Microcystin (N-methyl-L)R

## Niphimycins:

Niphimycins are antifungal macrolides isolated from terrestrial actinomycetes.

N3462 Niphimycin, 19-O-malonyl  
N3460 Niphimycin

## Other:

L0076 Latrunculin A

