Diapause-specific, recombinant venom peptide (*Gastrophysa atrocyanea*)

Catalogue number: VP0003, 0.15 mg
(0.5 mL at 0.3 mg/mL)

Description

Diapause-specific venom peptide is a recombinant peptide purified from *Escherichia coli* that was originally isolated from the venom of *Gastrophysa atrocyanea* (leaf beetle). The endogenous diapause-specific peptide has attractive properties, such as antifungal activity, N-type voltage-gated Ca^{2+} channel blocker and has high homology with amino acid sequences encoded in the insect iridescent virus. Tanaka *et al*. suggest that diapause-specific peptide can be utilized as a probe to analyse functional and evolutional of the life cycles of insects and iridoviruses. The recombinant peptide is provided in 50 mM NaHepes buffer, pH 7.5, 300 mM NaCl, at a 0.3 mg/mL concentration.

Purity

Diapause-specific venom peptide is produced recombinantly and subjected to a variety of highly stringent purification protocols to reach a degree of purity > 90%, as evaluated by SDS-PAGE and ESI-Q-ToF-MS.

Recombinant Peptide sequence

AVRIGPCDQVCPRIVPERHECCRAHGRSGYAYCSGGGMYCN

Specifications

Peptide Length	41 aa
Molecular weight	4470 Da
Number of Cys	6
Disulfide bonds	Cys^{31}-Cys^{45}, Cys^{35}-Cys^{57}, Cys^{46}-Cys^{64}
Source	Recombinant peptide from *Gastrophysa atrocyanea*
Format provided	Liquid
Uniprot Access	Q8T0W8
PDB Code	Not available

Storage Temperature

Diapause-specific venom peptide should be stored at 4°C and is stable for 12 months.

Reference

Biological and biochemical properties of this peptide are described in Tanaka, H. *et al*., Peptides 24 (9), 1327-1333 (2003).

Quality Control Assays

Purity

Recombinant Diapause-specific venom peptide is >90% pure as judged by SDS polyacrylamide gel electrophoresis followed by BlueSafe staining (MB15201).

Molecular weight determination

To confirm molecular weight, oxidation pattern, molecular integrity and degree of purification, the recombinant peptide was analysed through ElectroSpray Ionization Quadrupole Time-of-Flight Mass Spectrometry (ESI-Q-ToF-MS) using a Synapt G2 HDMS (Waters) instrument. The resulted mass spectra was deconvoluted using MassLynx software and the obtained mass was compared with the theoretical peptide mass considering that all cysteine residues are oxidized.

V1901

Certificate of Analysis

Test	Result
Peptide purity	Pass

Approved by:

Patrícia Ponte
Senior Manager, Quality Systems

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