Potassium channel toxin Aek, recombinant venom peptide (*Actinia equina*)

Catalogue number: VP0009, 0.2 mg
(0.5 mL at 0.4 mg/mL)

Description

Potassium channel toxin Aek venom peptide is a recombinant peptide purified from *Escherichia coli* that was originally isolated from the venom of sea anemone *Actinia equina* (Beadlet anemone). Aek toxin binds to voltage-dependent potassium channels (Kv1/KCNA), thereby inhibiting the binding of 125I-alpha-dendrotoxin to rat synaptosomal membranes (Minagawa, S. *et al*.). The recombinant peptide is provided in 50 mM NaHepes buffer, pH 7.5, 300 mM NaCl, at a 0.4 mg/mL concentration.

Purity

Potassium channel Aek 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

GCKDNFSANTCKHVKANNNCGSQKYATNCAKTCGKC

Specifications

Peptide Length	36 aa
Molecular weight	3813 Da
Number of Cys	6
Disulfide bonds	Cys^{2}-Cys^{36}, Cys^{11}-Cys^{29}, Cys^{20}-Cys^{33}
Source	Recombinant peptide from *Actinia equina*
Format provided	Liquid
Uniprot Access	P81897
PDB Code	Not available

Storage Temperature

Potassium channel Aek 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 Minagawa, S. *et al*., FEBS Lett. 427 (1), 149-151 (1998).

Quality Control Assays

Purity

Recombinant Potassium channel Aek 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.

V2101

Certificate of Analysis

Test	Result
Peptide purity	Pass

Approved by:

Patrícia Ponte
Senior Manager, Quality Systems

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