Waglerin-4, recombinant venom peptide (*Tropidolaemus wagleri*)

Catalogue number: VP0016, 50 µg
(0.5 mL at 0.1 mg/mL)

Description

Waglerin-4 venom peptide is a recombinant peptide purified from *Escherichia coli* that was originally isolated from the venom of *Tropidolaemus wagleri* (temple pit viper). Waglerins are a group of four small peptides (waglerin-1, waglerin-2, waglerin-3 and waglerin-4) that were isolated from the venom of Temple pit viper. These small peptides are described as antagonists of the nicotinic acetylcholine receptor (nAChR) and have long been used as tools for the characterization of the nAChR. Waglerins block nAChR inhibiting the acetylcholine ligation to receptor. Several studies report that these small peptides cause paralysis and death by respiratory failure (Molles *et al*., 2002). Waglerin-4 peptide was described as a selective inhibitor that blocks the epsilon form of the nAChR. The recombinant peptide is provided in 50 mM NaHepes buffer, pH 7.5, 300 mM NaCl, at a 0.1 mg/mL concentration.

Purity

Waglerin-4 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

SLGGKPDLRPCYPPCHYIPRPKPR

Specifications

Peptide Length	24 aa
Molecular weight	2748 Da
Number of Cys	2
Disulfide bonds	Cys^{11}-Cys^{15}
Source	Recombinant peptide from *Tropidolaemus wagleri*
Format provided	Liquid
Uniprot Access	P58930
PDB Code	Not available

Storage Temperature

Waglerin-4 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 Molles *et al*., Journal of Toxicology 21-3, 273-292 (2002).

Quality Control Assays

Purity

Recombinant Waglerin-4 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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