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Print Date: Jan 15th 2016

Certificate of Analysis

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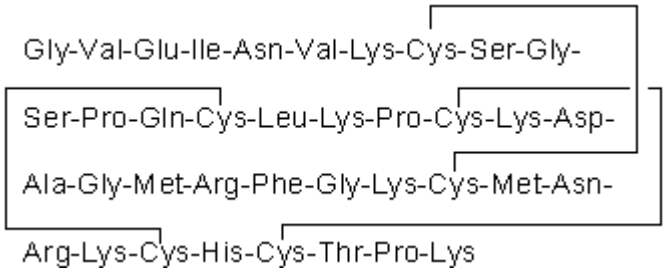
Product Name: **Kaliotoxin** **Catalog No.: 3564** **Batch No.: 1**

CAS Number: 145199-73-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{171}H_{283}N_{55}O_{49}S_8$
Batch Molecular Weight:	4149.94
Physical Appearance:	White lyophilised solid
Net Peptide Content:	98%
Solubility:	Soluble to 2 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	

2. ANALYTICAL DATA

HPLC:	Shows 98% purity
Mass Spectrum:	Consistent with structure

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CAS Number: 145199-73-1

Description:

Potent blocker of voltage-sensitive K^+ channels (IC_{50} values are 0.1, 1.1 and 25 nM for $K_V1.3$, $K_V1.1$ and $K_V1.2$ channels) respectively). Also inhibits Ca^{2+}-activated K^+ channels.

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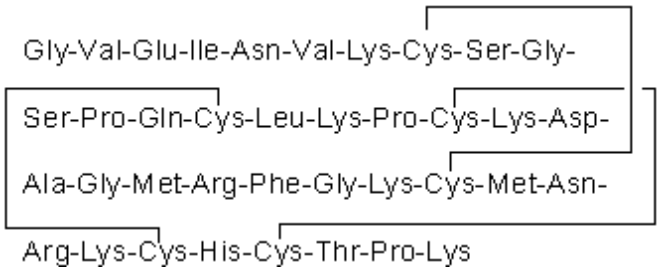

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

Net Peptide Content: 98% (Remaining weight made up of counterions and residual water).

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met,Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

References:

Romi *et al* (1993) Synthesis and characterization of kaliotoxin: is the 26-32 sequence essential for potassium channel recognition? J.Biol.Chem. ***268*** 26302. PMID: 8253752.

Mourre *et al* (1999) Distribution in rat brain of binding sites of kaliotoxin, a blocker of Kv1.1and Kv1.3 α-subunits. J.Pharmacol.Exp.Ther. ***291*** 943. PMID: 10565809.

Korukottu *et al* (2008) High-resolution 3D structure determination of kaliotoxin by solid-state NMR spectroscopy. PLoS ONE ***3*** e2359. PMID: 18523586.