

Certificate of Analysis

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Product Name: COG 133
CAS Number: 514200-66-9

Catalog No.: 3405 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉₇H₁₈₁N₃₇O₁₉
Batch Molecular Weight: 2169.73
Physical Appearance: White lyophilised solid
Net Peptide Content: 63%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Ac-Leu-Arg-Val-Arg-Leu-Ala-Ser-His-Leu-Arg-Lys-Leu-Arg-Lys-Arg-Leu-Leu-NH₂

2. ANALYTICAL DATA

HPLC: Shows 97.7% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	1.00	1.01	Lys	2.00	1.96
Arg	5.00	4.90	Met		
Asx			Phe		
Cys			Pro		
Glx			Ser	1.00	0.99
Gly			Thr		
His	1.00	0.99	Trp		
Ile			Tyr		
Leu	6.00	6.04	Val	1.00	1.01

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Catalog No.: 3405

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CAS Number: 514200-66-9

Description:

Apolipoprotein (ApoE) peptide fragment that functions via the low-density lipoprotein receptor-related protein (LRP). Substantially reduces the symptoms of experimental autoimmune encephalomyelitis, a model of human multiple sclerosis, and suppresses inflammation, demyelination and infiltration of cells into the spinal cord. Also acts as a non-competitive antagonist at $\alpha 7$ nicotinic acetylcholine receptors ($IC_{50} = 445$ nM).

Physical and Chemical Properties:

Batch Molecular Formula: $C_{97}H_{181}N_{37}O_{19}$

Batch Molecular Weight: 2169.73

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Leu-Arg-Val-Arg-Leu-Ala-Ser-His-Leu-
Arg-Lys-Leu-Arg-Lys-Arg-Leu-Leu-NH₂

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Net Peptide Content: 63% (Remaining weight made up of counterions and residual water).

Counter Ion: TFA

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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Sheng et al (2008) N-methyl-D-aspartate receptor inhibition by an apolipoprotein E-derived peptide relies on low-density lipoprotein receptor-associated protein. *Neuropharmacology* **55** 204. PMID: 18602124.

Gay et al (2006) Apolipoprotein E-derived peptides block $\alpha 7$ neuronal nicotinic acetylcholine receptors expressed in *Xenopus oocytes*. *J.Pharmacol.Exp.Ther.* **316** 835. PMID: 16249370.

Li et al (2006) Apolipoprotein E-derived peptides ameliorate clinical disability and inflammatory infiltrates into the spinal cord in a murine model of multiple sclerosis. *J.Pharmacol.Exp.Ther.* **318** 956. PMID: 16740622.

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