

Certificate of Analysis

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Product Name: MOG (35-55)

Catalog No.: 2568

Batch No.: 12

CAS Number: 149635-73-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₁₈ H ₁₇₇ N ₃₅ O ₂₉ S
Batch Molecular Weight:	2581.97
Physical Appearance:	White lyophilised solid
Counter Ion:	TFA
Solubility:	Soluble to 0.50 mg/ml in water
Storage:	Store at -20°C
Peptide Sequence:	Met-Glu-Val-Gly-Trp-Tyr-Arg-Ser-Pro-Phe-Ser-Arg-Val-Val-His-Leu-Tyr-Arg-Asn-Gly-Lys

2. ANALYTICAL DATA

HPLC:	Shows 95.0% purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys	1.00	0.98	
Arg	3.00	2.96	Met	1.00	0.99		
Asx	1.00	1.02	Phe	1.00	1.00		
Cys			Pro	1.00	1.01		
Glx	1.00	1.03	Ser	2.00	1.54		
Gly	2.00	2.00	Thr				
His	1.00	0.97	Trp	1.00	0.48		
Ile			Tyr	2.00	2.05		
Leu	1.00	0.98	Val	3.00	2.58		

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

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel: +1 612 379 2956

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CAS Number: 149635-73-4

Description:

MOG (35-55) or myelin oligodendrocyte glycoprotein (MOG) 35-55 is a minor component of CNS myelin. MOG (35-55) produces a relapsing-remitting neurological disease with extensive plaque-like demyelination, common to the manifestations of multiple sclerosis. MOG (35-55) induces strong T and B cell responses and is highly encephalitogenic. MOG (35-55) induces T cell-mediated multiple sclerosis in animal models. When co-administered with ITE, MOG (35-55) induces tolerogenic dendritic cells and suppresses disease development in mouse preclinical models of multiple sclerosis.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₁₈H₁₇₇N₃₅O₂₉S

Batch Molecular Weight: 2581.97

Physical Appearance: White lyophilised solid

Peptide Sequence:

Met-Glu-Val-Gly-Trp-Tyr-Arg-Ser-Pro-Phe-Ser-Arg-Val-Val-His-Leu-Tyr-Arg-Asn-Gly-Lys

Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble to 0.50 mg/ml in water

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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.

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 as 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:

Kenison et al (2020) Tolerogenic nanoparticles suppress central nervous system inflammation. *Proc.Natl.Acad.Sci.U.S.A.* **117** 32017. PMID: 33239445 .

Miyamura et al (2019) Myelin oligodendrocyte glycoprotein 35-55 (MOG 35-55)-induced experimental autoimmune encephalomyelitis: a model of chronic multiple sclerosis. *Bio.Protoc.* **9** e3453. PMID: 33654948.

Zhang et al (2004) T cell and antibody responses in relapsing-remitting experimental autoimmune encephalomyelitis in (C57BL/6xSJL) F1 mice. *J.Neuroimmunol.* **148** 1. PMID: 14975581.

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