

Certificate of Analysis

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Product Name: NFAT inhibitor, Cell Permeable

Catalog No.: 5710

Batch No.: 4

CAS Number: 592517-80-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄₇H₂₅₉N₆₇O₃₆S
Batch Molecular Weight: 3573.15
Physical Appearance: White lyophilised solid
Net Peptide Content: 69%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Gly-Gly-Gly-Met-Ala-Gly-Pro-His-Pro-Val-Ile-Val-Ile-Thr-Gly-Pro-His-Glu-Glu

2. ANALYTICAL DATA

HPLC: Shows 97.5% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	1.00	0.99	Lys		
Arg	11.00	10.77	Met	1.00	1.00
Asx			Phe		
Cys			Pro	3.00	3.00
Glx	2.00	2.04	Ser		
Gly	5.00	5.06	Thr	1.00	0.95
His	2.00	1.96	Trp		
Ile	2.00	1.61	Tyr		
Leu			Val	2.00	1.79

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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Batch No.: 4

CAS Number: 592517-80-1

Description:

NFAT inhibitor. Inhibits LPS or LPS plus IFN- γ -induced IL-12 p40, IL-12 p70, IL-23 and TNF secretion from bone marrow-derived macrophages (BMDMs). Also attenuates NO production and Nos2 mRNA expression in LPS-stimulated BMDMs. Improves symptoms in a mouse model of colitis. Exhibits immunosuppressive effects; enhances graft survival in mice. Cell permeable.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{147}H_{259}N_{67}O_{36}S$

Batch Molecular Weight: 3573.15

Physical Appearance: White lyophilised solid

Peptide Sequence:

Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Gly-Gly-Gly-Met-Ala-Gly-Pro-His-Pro-Val-Ile-Val-Ile-Thr-Gly-Pro-His-Glu-Glu

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: 69% (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 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 μ m filter to remove potential bacterial contamination whenever possible.

References:

Eloumi et al (2012) A cell permeable peptide inhibitor of NFAT inhibits macrophage cytokine expression and ameliorates experimental colitis. *PLoS One* **7** e34172. PMID: 22479554.

Noguchi et al (2004) A new cell-permeable peptide allows successful allogeneic islet transplantation in mice. *Nat.Med.* **10** 305. PMID: 14770176.

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