

Certificate of Analysis

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Product Name: NFAT Inhibitor

Catalog No.: 3930

Batch No.: 10

CAS Number: 249537-73-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₅H₁₁₈N₂₀O₂₂S
Batch Molecular Weight: 1683.94
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Met-Ala-Gly-Pro-His-Pro-Val-Ile-Val-Ile-Thr-Gly-Pro-His-Glu-Glu

2. ANALYTICAL DATA

HPLC: Shows 96.1% 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		
Arg			Met	1.00	0.97
Asx			Phe		
Cys			Pro	3.00	2.97
Glx	2.00	2.01	Ser		
Gly	2.00	2.04	Thr	1.00	1.01
His	2.00	2.08	Trp		
Ile	2.00	1.64	Tyr		
Leu			Val	2.00	1.68

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

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CAS Number: 249537-73-3

Description:

NFAT Inhibitor is a selective inhibitor of calcineurin-mediated dephosphorylation of nuclear factor of activated T cells (NFAT). Does not disrupt other calcineurin-dependent pathways. Inhibits NFAT activation and NFAT-dependent expression of endogenous cytokine genes in T cells.

Physical and Chemical Properties:

Batch Molecular Formula: C₇₅H₁₁₈N₂₀O₂₂S

Batch Molecular Weight: 1683.94

Physical Appearance: White lyophilised solid

Peptide Sequence:

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 2 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:

Nagamoto-Combs and Combs (2010) Microglial phenotype is regulated by activity of the transcription factor, NFAT (Nuclear Factor of Activated T Cells). *J. Neurosci.* **30** 9641. PMID: 20631193.

Roehrl et al (2004) Selective inhibition of calcineurin-NFAT signaling by blocking protein-protein interaction with small organic molecules. *Proc. Natl. Acad. Sci.* **101** 7554.

Aramburu et al (1999) Affinity-driven peptide selection of an NFAT inhibitor more selective than cyclosporin A. *Science* **285** 2129. PMID: 10497131.

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