

Certificate of Analysis

Print Date: Apr 4th 2024

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Product Name: NFAT inhibitor, Cell Permeable Catalog No.: 5710 Batch No.: 7

CAS Number: 592517-80-1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄₇H₂₅₉N₆₇O₃₆S

Batch Molecular Weight: 3573.15

Physical Appearance: White lyophilised solid

Counter Ion: TFA

Solubility: Soluble to 1 mg/ml in water

Storage: Store at -20°C

> 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 98.8% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	1.00	1.04	Lys		
Arg	11.00	10.93	Met	1.00	0.92
Asx			Phe		
Cys			Pro	3.00	3.04
Glx	2.00	2.00	Ser		
Gly	5.00	4.97	Thr	1.00	1.03
His	2.00	1.84	Trp		
lle	2.00	1.64	Tyr		
Leu			Val	2.00	1.65

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



Product Information

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Product Name: NFAT inhibitor, Cell Permeable

CAS Number: 592517-80-1

Description:

NFAT inhibitor, Cell Permeable is an 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. Reduces inflammation and epithelial damage in a mouse model of colitis. In an animal model of Alzheimer's disease NFAT inhibitor improves cognitive and synaptic function, reduces glial activation and lowers amyloid levels; in vitro it reduces glutamate dysregulation and neuron hyperactivity.

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:

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 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.

Catalog No.: 5710

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:

Lee *et al* (2022) Function and therapeutic value of astrocytes in neurological diseases. Nat.Rev.Drug Discov. *21* 339. PMID: 35173313. **Sompol** *et al* (2017) Calcineurin/NFAT signaling in activated astrocytes drives network hyperexcitability in Aβ-bearing mice. J.Neurosci. *37* 6132. PMID: 28559377.

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

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