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TOCRIS

Print Date: Feb 28th 2024

Certificate of Analysis

www.tocris.com

Product Name: **NFAT Inhibitor** **Catalog No.: 3930** **Batch No.: 6**

CAS Number: 249537-73-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{75}H_{118}N_{20}O_{22}S$

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 95.8% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala	1.00	1.00	Lys	0.00	Detected
Arg	0.00	Detected	Met	1.00	1.00
Asx	0.00	Detected	Phe	0.00	Detected
Cys	0.00	Detected	Pro	3.00	3.30
Glx	2.00	2.30	Ser	0.00	Detected
Gly	2.00	2.10	Thr	1.00	0.90
His	2.00	2.10	Trp	0.00	Detected
Ile	2.00	1.60	Tyr	0.00	Detected
Leu	0.00	Detected	Val	2.00	1.60

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

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Product Name: **NFAT Inhibitor** **Catalog No.: 3930** **6**

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:

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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 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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