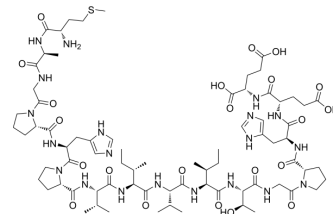


## NFAT Inhibitor-1

**Cat. No.:** HY-P1026  
**CAS No.:** 249537-73-3  
**Molecular Formula:** C<sub>75</sub>H<sub>118</sub>N<sub>20</sub>O<sub>22</sub>S  
**Molecular Weight:** 1683.93  
**Sequence:** Met-Ala-Gly-Pro-His-Pro-Val-Ile-Val-Ile-Thr-Gly-Pro-His-Glu-Glu  
**Sequence Shortening:** MAGPHPVIVITGPHEE  
**Target:** Nuclear Factor of activated T Cells (NFAT)  
**Pathway:** Immunology/Inflammation  
**Storage:** Sealed storage, away from moisture



Powder -80°C 2 years  
 -20°C 1 year  
 \* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### SOLVENT & SOLUBILITY

In Vitro	H <sub>2</sub> O : 100 mg/mL (59.38 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM	0.5938 mL	2.9692 mL	5.9385 mL	
		5 mM	0.1188 mL	0.5938 mL	1.1877 mL	
	10 mM	0.0594 mL	0.2969 mL	0.5938 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (29.69 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

Description	NFAT Inhibitor (VIVIT peptide) is a cell-permeable peptide inhibitor of nuclear factor of activated Tcells (NFAT) that selectively inhibits calcineurin-mediated dephosphorylation of NFAT <sup>[1][2]</sup> .
IC <sub>50</sub> & Target	Nuclear factor of activated Tcells (NFAT) <sup>[1][2]</sup>
In Vitro	NFAT Inhibitor-1 treatment significantly inhibits nuclear translocation of NFATc1 for 24 hours. Long-term treatment with VIVIT significantly inhibits the cytoplasmic levels of cathepsin K, TRAP, and MMP-9 <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis <sup>[2]</sup>

Cell Line:	Human peripheral blood CD14 <sup>+</sup> monocytes
Concentration:	10 $\mu$ M
Incubation Time:	24 hours or 21 days
Result:	Short-term treatment with 10 $\mu$ M, significantly inhibited nuclear translocation of NFATc1. Long-term treatment, significantly inhibited the cytoplasmic levels of cathepsin K, TRAP, and MMP-9.

## CUSTOMER VALIDATION

- Arthritis Rheumatol. 2019 Aug;71(8):1252-1264.
- J Immunother Cancer. 2021 Jul;9(7):e002840.
- Cell Rep. 2021 Apr 6;35(1):108959.
- Cell Prolif. 2023 Mar 27;e13460.
- Biomed Pharmacother. 2023 May.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Aramburu J, et al. Affinity-driven peptide selection of an NFAT inhibitor more selective than cyclosporin A. Science. 1999 Sep 24;285(5436):2129-33.
- [2]. Ma JD, et al. Activation of the Peroxisome Proliferator-Activated Receptor  $\gamma$  Coactivator 1 $\beta$ /NFATc1 Pathway in Circulating Osteoclast Precursors Associated With Bone Destruction in Rheumatoid Arthritis. Arthritis Rheumatol. 2019 Aug;71(8):1252-1264.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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