# **Tuftsin diacetate**

Cat. No.:	HY-P0240A	
CAS No.:	72103-53-8	OH H <sub>2</sub> N
Molecular Formula:	$C_{25}H_{48}N_8O_{10}$	o ↓ NH
Molecular Weight:	620.7	
Sequence:	Thr-Lys-Pro-Arg	
Sequence Shortening:	TKPR	0
Target:	Endogenous Metabolite	но но
Pathway:	Metabolic Enzyme/Protease	
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	

BIOLOGICAL ACTIVITY		
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Description	Tuftsin diacetate, a tetrapeptide, is a macrophage/microglial activator.	
IC <sub>50</sub> & Target	Human Endogenous Metabolite	
In Vitro	Tuftsin is a tetrapeptide, Thr-Lys-Pro-Arg, which resides in the Fc-domain of the heavy chain of immunoglobulin G. Tuftsin possesses a broad spectrum of activities related primarily to the immune system function and exerts on phagocytic cells, notably on macrophages. Tuftsin's capacity to augment cellular activation is mediated by specific receptors that are identified, characterized, and recently isolated from rabbit peritoneal granulocytes <sup>[1]</sup> . Tuftsin, a macrophage/microglial activator, dramatically improves the clinical course of experimental autoimmune encephalomyelitis (EAE), a well-established animal model for MS. Tuftsin administration correlates with upregulation of the immunosuppressive Helper-2 Tcell (Th2) cytokine transcription factor GATA-3. Tuftsin promotes phagocytic activity for cells of monocytic origin, such as neutrophils, macrophages and microglia, all of which are thought to express Tuftsin receptors <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

### **CUSTOMER VALIDATION**

- Biochem Pharmacol. 2022 May;199:115030.
- bioRxiv. 2023 Mar 25.

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## REFERENCES

[1]. Fridkin M, et al. Tuftsin: its chemistry, biology, and clinical potential. Crit Rev Biochem Mol Biol. 1989;24(1):1-40.

[2]. Wu M, et al. Tuftsin promotes an anti-inflammatory switch and attenuates symptoms in experimentalautoimmune encephalomyelitis. PLoS One. 2012;7(4):e34933.



# OH H\_\_\_\_NH2 йΗ

**Product** Data Sheet

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

 Tel: 609-228-6898
 Fax: 609-228-5909
 E-mail: tech@MedChemExpress.com

 Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA