

CALP2 TFA

Cat. No.:	HY-P1076A	
Molecular Formula:	C ₇₀ H ₁₀₅ F ₃ N ₁₄ O ₁₅ S	
Molecular Weight:	1471.72	
Sequence:	Val-Lys-Phe-Gly-Val-Gly-Phe-Lys-Val-Met-Val-Phe	VKFGVGFKVMVF (TFA salt)
Sequence Shortening:	VKFGVGFKVMVF	
Target:	Calmodulin	
Pathway:	Membrane Transporter/Ion Channel	
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	DMSO : 50 mg/mL (33.97 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		0.6795 mL	3.3974 mL	6.7948 mL
		5 mM		0.1359 mL	0.6795 mL	1.3590 mL
	10 mM		0.0679 mL	0.3397 mL	0.6795 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (1.70 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (1.70 mM); Suspended solution; Need ultrasonic 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (1.70 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	CALP2 TFA is a calmodulin (CaM) antagonist (K _d of 7.9 μM) with high affinity for binding to the CaM EF-hand/Ca ²⁺ -binding site. CALP2 TFA inhibits CaM-dependent phosphodiesterase activity and increases intracellular Ca ²⁺ concentrations. CALP2 TFA potently inhibits of adhesion and degranulation. CALP2 TFA is also a strong activator of alveolar macrophages ^{[1][2][3][4]} .
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REFERENCES

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- [1]. R Houtman, et al. Attenuation of very late antigen-5-mediated adhesion of bone marrow-derived mast cells to fibronectin by peptides with inverted hydrophathy to EF-hands. *J Immunol.* 2001 Jan 15;166(2):861-7.
- [2]. R Ten Broeke, et al. Calcium sensors as new therapeutic targets for airway hyperresponsiveness and asthma. *FASEB J.* 2001 Aug;15(10):1831-3.
- [3]. Robert Ten Broeke, et al. Specific modulation of calmodulin activity induces a dramatic production of superoxide by alveolar macrophages. *Lab Invest.* 2004 Jan;84(1):29-40.
- [4]. M Villain, et al. De novo design of peptides targeted to the EF hands of calmodulin. *J Biol Chem.* 2000 Jan 28;275(4):2676-85.
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Caution: Product has not been fully validated for medical applications. For research use only.

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