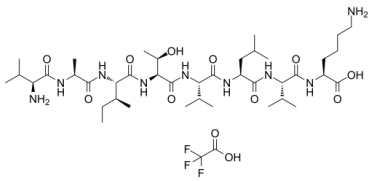
Data Sheet

Product Name:	CALP1 (TFA)
Cat. No.:	CS-0131835
Molecular Formula:	$C_{42}H_{76}F_3N_9O_{12}$
Molecular Weight:	956.10
Target:	Apoptosis; Calcium Channel; mGluR; Phosphodiesterase (PDE)
Pathway:	Apoptosis; GPCR/G Protein; Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease; Neuronal Signaling
Solubility:	H2O : 16.67 mg/mL (17.44 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

CALP1 TFA is a **calmodulin (CaM)** agonist ($\mathbf{K_d}$ of 88 μM) with binding to the **CaM** EF-hand/Ca^{2+}-binding site. CALP1 TFA blocks calcium influx and apoptosis ($\mathbf{IC_{50}}$ of 44.78 μM) through inhibition of **calcium channel** opening. CALP1 TFA blocks **glutamate receptor channels** and blocks a store-operated nonselective cation channel. CALP1 TFA activates **CaM**-dependent **phosphodiesterase** activity[1][2][3][4]. IC50 & Target: Kd: 88 μM (Calmodulin)[4]

References:

[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 hydropathy 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]. M K Manion, et al. A new type of Ca(2+) channel blocker that targets Ca(2+) sensors and prevents Ca(2+)-mediated apoptosis. FASEB J. 2000 Jul;14(10):1297-306.

[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.

CAIndexNames:

L-Lysine, L-valyl-L-alanyl-L-isoleucyl-L-threonyl-L-valyl-L-leucyl-L-valyl- (TFA)

SMILES:

NCCCC[C@@H](C(O)=O)NC([C@H](C(C)C)NC([C@H](CC(C)C)NC([C@H](C(C)C)NC([C@H]([C@H](O)C)NC([C@H]([C@@H](C)CC)NC([C@H](C)NC([C@H](C(C)C)N)=O)=O)=O)=O)=O)=O)=O.OC(C(F)(F)F)=O

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

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