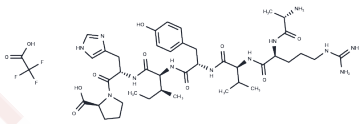
Data Sheet (Cat.No.T37496L)

TargetMol

Alamandine TFA

Chemical Properties



CAS No. :

Formula: C42H63F3N12O11

Molecular Weight: 969.02

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Alamandine TFA , a member of the renin-angiotensin system (RAS), a vasoactive peptide, is an endogenous ligand of the G protein-coupled receptor MrgD. Alamandine TFA targets to protect the kidney and heart through anti-hypertensive actions[1][2].
Targets(IC50)	RAAS
In vitro	Alamandine TFA is generated by catalysis of Ang A via ACE2 or directly from Angiotensin 1-7 (Ang-(1-7)). Derived from angiotensin II (Ang II) by Ang II-converting enzyme 2 (ACE2), it shows vasodilating (thus protective) properties. Ang (1-7) can be decarboxylated to a peptide called Alamandine TFA. Alamandine TFA is also an endogenous peptide identified in human blood[1]. Alamandine TFA elevates cAMP concentration in primary endothelial and mesangial cells, also suggesting Gs coupling [2]. Alamandine TFA decreases secretion, expression, and blood levels of leptin. Alamandine TFA induced expression of iNOS and plasminogen activator inhibitor-1 (PAI-1) in adipose tissue and isolated adipocytes[2].
In vivo	Alamandine TFA (0.15 ?μL/h; administered by mini-osmotic pumps; for 6 weeks) treatment ameliorates hypertension and impaires left ventricle (LV) function in SHRs. Also decreases the mass gains of heart and lung in SHRs, suppresses cardiomyocyte cross-sectional area expansion, and inhibits the mRNA levels of atrial natriuretic peptide and brain natriuretic peptide[3]. heart and lung in SHRs, suppresses cardiomyocyte cross-sectional area expansion, and inhibits the mRNA levels of atrial natriuretic peptide and brain natriuretic peptide[3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.032 mL	5.1599 mL	10.3197 mL
5 mM	0.2064 mL	1.032 mL	2.0639 mL
10 mM	0.1032 mL	0.516 mL	1.032 mL
50 mM	0.0206 mL	0.1032 mL	0.2064 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Daniel C Villela, et al. Alamandine: a new member of the angiotensin family. Curr Opin Nephrol Hypertens. 2014 Mar;23(2):130-4.
Johanna Schleifenbaum. Alamandine and Its Receptor MrgD Pair Up to Join the Protective Arm of the Renin-Angiotensin System. Front Med (Lausanne). 2019 Jun 11;6:107.
Chi Liu, et al. Alamandine attenuates hypertension and cardiac hypertrophy in hypertensive rats. Amino Acids. 2018 Aug;50(8):1071-1081.