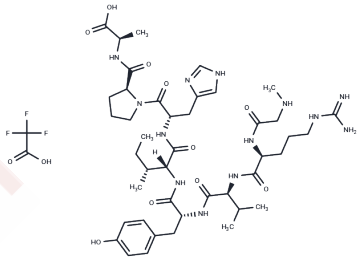
Data Sheet (Cat.No.TP2158)

TRV-120027 TFA

Chemical Properties



CAS No. :

Formula: C45H68F3N13O12

Molecular Weight: 1040.1

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	TRV-120027 TFA is an angiotensin II-mediated vasoconstriction inhibitor and increases cardiomyocyte contractility. TRV-120027 TFA is a β-arrestin-1-biased AT1R agonist engaging ß-arrestins while blocking G-protein signaling[1]. TRV-120027 TFA induces acute catecholamine secretion through cation channel subfamily C3 (TRPC3) coupling and promotes the formation of a macromolecular complex composed of AT1R-β-arrestin-1-TRPC3-PLCγ at the plasma membrane.
Targets(IC50)	RAAS,Arrestin,TRP/TRPV Channel
In vitro	Treatment of 100 nM TRV-120027 TFA induces an [Ca2+]i increase in HEK293 cells co-transfected with AT1R, β-arrestin-1, and TRPC3, which are significantly blocked by Pyr3 pre-incubation in HEK293 cells co-transfected with Flag-AT1R-Cherry, HA-β-arrestin-1, and TRPC3-GFP[1]. Treatment of 100 nM TRV-120027 TFA significantly increases the AT1R and TRPC3 association with the immunoprecipitated β-arrestin-1 in HEK293 cells co-transfected with Flag-AT1R-cherry, HA-β-arrestin-1 and TRPC3-GFP[1].
In vivo	TRV-120027 TFA combined with furosemide decreases cardiac preload and afterload, systemic and renal vascular resistances, and left ventricular external work while increasing cardiac output and renal blood flow[2].

Solubility Information

Solubility	DMSO: 88 mg/mL (84.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (3.17 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9614 mL	4.8072 mL	9.6145 mL
5 mM	0.1923 mL	0.9614 mL	1.9229 mL
10 mM	0.0961 mL	0.4807 mL	0.9614 mL
50 mM	0.0192 mL	0.0961 mL	0.1923 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

Liu CH, et al. Arrestin-biased AT1R agonism induces acute catecholamine secretion through TRPC3 coupling.Nat Commun. 2017 Feb 9;8:14335.

Boerrigter G, et al. TRV120027, a novel β-arrestin biased ligand at the angiotensin II type I receptor, unloads the heart and maintains renal function when added to furosemide in experimental heart failure.Circ Heart Fail. 2012 Sep 1;5(5):627-34. Epub 2012 Aug 13.