

Apelin-13 triTFA(217082-58-1(free base))

Chemical Properties

CAS No. :

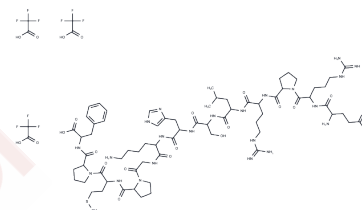
Formula: C75H114F9N23O22S

Molecular Weight: 1892.89

Keep away from moisture

Storage: 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	Apelin-13 triTFA is the endogenous ligand of the APJ receptor, activating this G protein-coupled receptor with an EC50 value of 0.37 nM.
Targets(IC50)	Others
In vivo	Apelin-13 highly increased AQP4 expression as well as reduced neurological scores and infarct volume. Importantly, Apelin-13 played a role of BBB protection in both types of mice by reducing BBB permeability, increased vascular endothelial growth factor, upregulated endothelial nitric oxide synthase, and downregulated inducible NOS. In morphology, we demonstrated Apelin-13 suppressed tight junction opening and endothelial cell swelling via electron microscopy detection. Meanwhile, Apelin-13 also alleviated apoptosis of astrocytes and promoted angiogenesis[1]. Apelin 13 treatment significantly reduced infarct size, improved neurological outcomes, decreased brain edema, and inhibited cell apoptosis, oxidative stress, and neuroinflammation after I/R. Apelin 13 significantly increased the expression of Nrf2 and the phosphorylation levels of AMPK and GSK-3β[2].
Animal Research	The expression of AQP4 induced by Apelin-13 injection at 1, 3, and 7 days after middle cerebral artery occlusion. Meanwhile, examined the effects of Apelin-13 on neurological function, infarct volume, and BBB disruption owing to cerebral ischemia in wild type mice, and tested whether such effects were AQP4 dependent by using AQP4 knock-out mice[1].

Solubility Information

Solubility	DMSO: 30 mg/mL (15.85 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5283 mL	2.6415 mL	5.2829 mL
5 mM	0.1057 mL	0.5283 mL	1.0566 mL
10 mM	0.0528 mL	0.2641 mL	0.5283 mL
50 mM	0.0106 mL	0.0528 mL	0.1057 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

Chu H , Yang X , Huang C , et al. Apelin-13 Protects against Ischemic Blood-Brain Barrier Damage through the Effects of Aquaporin-4[J]. Cerebrovascular Diseases, 2017:10-25.

Duan J , Cui J , Yang Z , et al. Neuroprotective effect of Apelin 13 on ischemic stroke by activating AMPK/GSK-3 β /Nrf2 signaling[J]. Journal of Neuroinflammation, 2019, 16(1).

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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