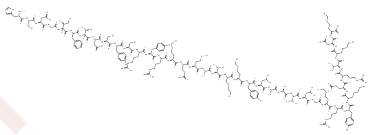
Data Sheet (Cat.No.TP1054)

TargetMol

PACAP (1-38), human, ovine, rat TFA

Chemical Properties



CAS No. :

Formula: C203H331N63O53S.C2HF3O2

Molecular Weight: 4648.28

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	PACAP (1-38), human, ovine, rat TFA is an endogenous neuropeptide and a high-affinity agonist for the PAC1 receptor. This 38-amino acid peptide binds to the PAC1 receptor to activate adenylate cyclase, inducing an increase in intracellular cAMP levels and triggering downstream signaling. Research demonstrates that C-terminal amidation of PACAP (1-38), human, ovine, rat TFA is dispensable for its biological activity at the PAC1 receptor, with the non-amidated form retaining full agonistic potency. It plays crucial roles in neuroprotection, regulation of insulin secretion, and vasodilation.
Targets(IC50)	PACAP
In vitro	In human PAC1-expressing HEK293 cells, PACAP (1-38), human, ovine, rat TFA potently induces cAMP production, with amidated and non-amidated forms showing similar potency [1]. In neuronal cultures, the peptide promotes neurite outgrowth and enhances neuronal survival via the activation of PAC1-mediated signaling [1]。

Solubility Information

Solubility	H2O: Soluble,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2151 mL	1.0757 mL	2.1513 mL
5 mM	0.043 mL	0.2151 mL	0.4303 mL
10 mM	0.0215 mL	0.1076 mL	0.2151 mL
50 mM	0.0043 mL	0.0215 mL	0.043 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

Emery AC, et al. C-terminal amidation of PACAP-38 and PACAP-27 is dispensable for biological activity at the PAC1 receptor. Peptides. 2016 May;79:39-48.