

Rotigaptide TFA(355151-12-1 free base)

Chemical Properties

CAS No. :

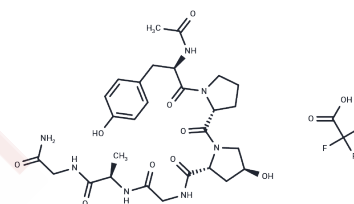
Formula: C30H40F3N7O11

Molecular Weight: 731.67

Keep away from moisture

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Rotigaptide TFA(355151-12-1 free base) is a novel and specific modulator of Cx43 and is a potent AAP. Rotigaptide TFA(355151-12-1 free base) prevents the uncoupling of Cx43-mediated gap junction communication and normalizes cell-to-cell communication during acute metabolic stress.
Targets(IC50)	Gap Junction Protein
In vitro	Rotigaptide TFA (100 nM; 24 hours) does not affect INS-1 cell apoptosis itself. Rotigaptide (100 nM; 24 hours) has a positive effect on the cycloheximide-mediated decrease in Cx43 protein levels in cultured neonatal ventricular myocytes. And it obviously decreases apoptosis in cytokine-exposed cells ~10% at IL-1b concentrations above 15 pg/ml in rat insulin-producing INS-1 cells [1][2].
In vivo	Rotigaptide TFA (intravenous administration; 300 mg/kg; single dose) treatment in mice and rats does not cause toxicity in either species. Rotigaptide (continuous intravenous infusion; 5-14 days) in rats (100 mg/kg) and dogs (10 mg/kg) is well tolerated and produces no compound-related effects or histological toxicological findings in escalating dose studies [3].

Solubility Information

Solubility	DMSO: 7.32 mg/mL (10 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	1.3667 mL	6.8337 mL	13.6674 mL
5 mM	0.2733 mL	1.3667 mL	2.7335 mL
10 mM	0.1367 mL	0.6834 mL	1.3667 mL
50 mM	0.0273 mL	0.1367 mL	0.2733 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

Ghiasi SM, Hansen JB, Christensen DP, Tyrberg B, Mandrup-Poulsen T. The Connexin 43 Regulator Rotigaptide Reduces Cytokine-Induced Cell Death in Human Islets. *Int J Mol Sci.* 2020;21(12):4311. Published 2020 Jun 17. doi: 10.3390/ijms21124311

Stahlhut M, Petersen JS, Hennan JK, Ramirez MT. The antiarrhythmic peptide rotigaptide (ZP123) increases connexin 43 protein expression in neonatal rat ventricular cardiomyocytes. *Cell Commun Adhes.* 2006;13(1-2):21-27. doi:10.1080/15419060600631375

Pharmacological modulation of gap junction function with the novel compound rotigaptide: a promising new principle for prevention of arrhythmias

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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