Data Sheet (Cat.No.T76279)

TargetMol

Retatrutide

Chemical Properties

CAS No. : 2381089-83-2

Formula: C221H342N46O68

Molecular Weight: 4732.09

Storage: Store at low temperature,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	Retatrutide (LY3437943) is a triple agonist of the glucagon receptor, glucose-dependent insulinotropic polypeptide receptor, and glucagon-like peptide-1 receptor (GLP-1R), and inhibits GCGR, GIPR, and GLP-1R.Retatrutide can be used to study obesity.
Targets(IC50)	Glucagon Receptor
In vitro	Retatrutide (LY3437943) exhibits activity against human GCGR, GIPR, and GLP-1R with EC50 values of 5.79, 0.0643, and 0.775 nM, respectively[1]. For mouse GCGR, GIPR, and GLP-1R, Retatrutide shows activity with EC50 values of 2.32, 0.191, and 0.794 nM, respectively[1]. In terms of binding affinity, Retatrutide has Ki values of 5.6, 0.057, and 7.2 nM for human GCGR, GIPR, and GLP-1R, respectively[1]. Similarly, for mouse GCGR, GIPR, and GLP-1R, Retatrutide exhibits binding affinity with Ki values of 73, 2.8, and 1.3 nM, respectively[1].
In vivo	In vivo, Retatrutide (LY3437943) engages with GCGR and, when administered through subcutaneous injection at a single dose of 0.47 mg/kg, improves glucose tolerance in an ipGTT (intraperitoneal glucose tolerance test) through activation of GIP or GLP-1 receptors[1]. With subcutaneous injections at 10 mL/kg every 3 days in a cycle sustained for 21 days, Retatrutide leads to significant weight reduction and increased energy expenditure through activation of glucagon receptor[1].

Solubility Information

Solubility	H2O: 30 mg/mL (6.34 mM),when pH is adjusted to 7 with NaOH. Sonication is recommended. DMSO: 30 mg/mL (6.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2113 mL	1.0566 mL	2.1132 mL
5 mM	0.0423 mL	0.2113 mL	0.4226 mL
10 mM	0.0211 mL	0.1057 mL	0.2113 mL
50 mM	0.0042 mL	0.0211 mL	0.0423 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

Tamer Coskun, et al. LY3437943, a novel triple glucagon, GIP, and GLP-1 receptor agonist for glycemic control and weight loss: From discovery to clinical proof of concept. Cell Metab. 2022 Sep 6;34(9):1234-1247.e9.