

Tirzepatide monosodium salt

Chemical Properties

CAS No. :

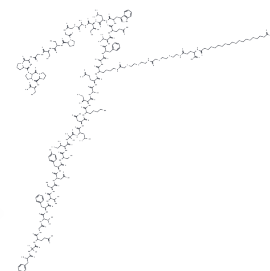
Formula: C225H347N48O68Na

Molecular Weight: 4835.51

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	Tirzepatide sodium salt (LY3298176 sodium salt) is a GIP and GLP-1 receptor agonist with neuroprotective activity and can be used to treat obesity.
Targets(IC50)	Glucagon Receptor
In vitro	Under high glucose-induced conditions, treatment of SHSY5Y cells with Tirzepatide sodium salt at concentrations ranging from 0 to 0.4 μ M for 7 days resulted in significant upregulation of CREB and BDNF mRNA expression. Additionally, it increased the protein levels of pAkt, MAP2, GAP43, AGL4, GLUT4, SORBS1, and Bcl-2 while decreasing the protein level of BAX[1].
In vivo	In diet-induced obese (DIO) mice, Tirzepatide sodium salt (10 nM/kg, subcutaneous injection) reduced body weight and food consumption. It decreased glucose, insulin, leptin, and C-peptide levels[2].

Solubility Information

Solubility	DMSO: 255 mg/mL (52.73 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2068 mL	1.034 mL	2.068 mL
5 mM	0.0414 mL	0.2068 mL	0.4136 mL
10 mM	0.0207 mL	0.1034 mL	0.2068 mL
50 mM	0.0041 mL	0.0207 mL	0.0414 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

Fontanella RA, et al. Tirzepatide prevents neurodegeneration through multiple molecular pathways. *J Transl Med.* 2024 Jan 29;22(1):114.

Huang L, et al. Tirzepatide inhibits tumor growth in mice with diet-induced obesity. *bioRxiv*, 2023: 2023.06.22.546093.

Guo X, et al. Tirzepatide ameliorates spatial learning and memory impairment through modulation of aberrant insulin resistance and inflammation response in diabetic rats. *Front Pharmacol.* 2023 Aug 28;14:1146960.

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