Data Sheet

Product Name:	Retatrutide (TFA)
Cat. No.:	CS-0634029
Molecular Formula:	$C_{221}H_{342}N_{46}O_{68\cdot x}C_2HF_3O_2$
Molecular Weight:	4731.33 (free base)
Target:	GCGR; GLP Receptor
Pathway:	GPCR/G Protein
Solubility:	H_2O : 20 mg/mL (ultrasonic;adjust pH to 9 with NH3·H2O);DMSO : ≥ 100 mg/mL

Retatrutide (TFA)

BIOLOGICAL ACTIVITY:

Retatrutide (LY3437943) TFA is a triple agonist peptide of **the glucagon receptor (GCGR), glucosedependent insulinotropic polypeptide receptor (GIPR), and glucagon-like peptide-1 receptor (GLP-1R)**. Retatrutide TFA binds human GCGR, GIPR, and GLP-1R with **EC_{50}** values of 5.79, 0.0643 and 0.775 nM, respectively. Retatrutide TFA can be used for the research of obesity[1].
IC50 & Target:EC50 (for human): 5.79 (GCGR), 0.0643 (GIPR), 0.775 nM (GLP-1R)[1].
EC50 (for mouse): 2.32 (GCGR), 0.191 (GIPR), 0.794 nM (GLP-1R) [1].
Ki (for human): 5.6 (GCGR), 0.057 (GIPR), 7.2 nM (GLP-1)[1].
In Vitro:Retatrutide (LY3437943) TFA has efficacy for human GCGR, GIPR, and GLP-1R with EC_{50} values of 5.79, 0.0643 and 0.775 nM, respectively[1].
Retatrutide has efficacy for mouse GCGR, GIPR, and GLP-1R with EC_{50} values of 2.32, 0.191 and 0.794 nM, respectively[1].
Retatrutide has binding affinity for human GCGR, GIPR, and GLP-1R with K_i values of 5.6, 0.057 and 7.2 nM, respectively[1].
Retatrutide has binding affinity for mouse GCGR, GIPR, and GLP-1R with K_i values of 73, 2.8 and 1.3 nM, respectively[1].
In Vivo:Retatrutide (LY3437943) TFA (s.c.; 47 μg/kg; single) engages GCGR in vivo and can improve glucose tolerance in an ipGTT through either the GIP or GLP-1 receptors[1].
Retatrutide (s.c.; 10 mL/kg; cycle every 3 days; for 21 days) causes great body weight loss and increases energy expenditure through glucagon receptor activatio[1].
Retatrutide has safety and tolerability[1].

References:

[1]. 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.

CAIndexNames:

L-Serinamide, L-tyrosyl-2-methylalanyl-L-glutaminylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L-α-aspartyl-L-tyrosyl-L-seryl-L-isoleucyl-2-methyl-L-leucyl-L-leucyl-L-α-aspartyl-L-lysyl-N6-[N-(19-carboxy-1-oxononadecyl)-L-γ-glutamyl-2-[2-(2-aminoethoxy)ethoxy]acetyl]-L-lysyl-L-alanyl-L-glutaminyl-2-methylalanyl-L-alanyl-L-phenylalanyl-L-isoleucyl-L-α-glutamyl-L-tyrosyl-L-leucyl-L-leucyl-L-α-glutamylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-alanyl-L-prolyl-L-prolyl-L-prolyl- (TFA)

SMILES:

Caution: Product has not been fully validated for medical applications. For research use only.

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