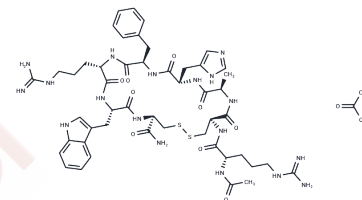


Setmelanotide Acetate(920014-72-8 free base)

Chemical Properties

CAS No. :	2759937-80-7
Formula:	C51H72N18O11S2
Molecular Weight:	1177.35
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Setmelanotide Acetate(920014-72-8 free base) (RM-493 Acetate) is a selective agonist of melanocortin 4 receptor (MC4R)(human and rat MC4R with EC50s of 0.27 nM and 0.28 nM, respectively).
Targets(IC50)	Melanocortin Receptor
In vitro	Melanocortin receptor agonists act in the brain to regulate food intake and body weight and, independently of these actions, affect insulin sensitivity. Setmelanotide exhibits agonist activity to human and rat MC4R(human and rat MC4R with Kis of 2.1 and 2.7 nM and EC50s of 0.27 and 0.28 nM, respectively)[1].
In vivo	Inhibition of refeeding after an overnight fast by BIM-22493 is dependent on functional MC4R.glucose homeostasis acutely improved by BIM-22493. BIM-22493(Lepob/Lepob mice) exhibits significantly improved glucose clearance when compared to controls. Chronic BIM-22493 treatment was associated with significantly lower levels of serum insulin, glucose and HOMA-IR values, suggesting an improvement in insulin sensitivity [1]. Treatment with setmelanotide results in transient decreases in food intake (35%), with persistent weight loss over 8 weeks of treatment (13.5%) in a diet-induced obese nonhuman primate model[2].

Solubility Information

Solubility	DMSO: 22.5 mg/mL (19.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (1.7 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8494 mL	4.2468 mL	8.4937 mL
5 mM	0.1699 mL	0.8494 mL	1.6987 mL
10 mM	0.0849 mL	0.4247 mL	0.8494 mL
50 mM	0.017 mL	0.0849 mL	0.1699 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

Kumar KG, et al. Analysis of the therapeutic functions of novel melanocortin receptor agonists in MC3R- and MC4R-deficient C57BL/6J mice. *Peptides*. 2009 Oct;30(10):1892-900.

Kievit P, et al. Chronic treatment with a melanocortin-4 receptor agonist causes weight loss, reduces insulin resistance, and improves cardiovascular function in diet-induced obese rhesus macaques. *Diabetes*. 2013 Feb;62(2):490-7.

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