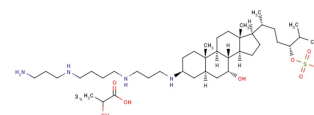


MSI-1436 lactate

Chemical Properties

CAS No.: 1309370-86-2
Formula: C₃₇H₇₂N₄O₅S₇/2C₃H₆O₃
Molecular Weight: 1000.17
Appearance: N/A
Storage: 0-4°C for short term (days to weeks), or -20°C for long term (months).

**Biological Description**

Description	MSI-1436 lactate is a selective, non-competitive the enzyme protein-tyrosine phosphatase 1B (PTB1B)inhibitor(IC ₅₀ of appr 1 μM)
Targets(IC ₅₀)	PTB1B: 1 μM TCPTP: 224 μM
In vitro	Trodusquemine significantly enhanced insulin-stimulated tyrosine phosphorylation of insulin receptor (IR) beta and STAT3, direct targets of PTP1B, in HepG2 cells in vitro and/or hypothalamic tissue[1].
In vivo	Trodusquemine (MSI-1436) causes rapid and reversible weight loss in genetic models of obesity. Trodusquemine suppressed appetite, reduced body weight (BW) in a fat-specific manner, and improved plasma insulin and leptin levels in mice[1].

Solubility Information

Solubility	DMSO: 54 mg/mL (53.99 mM) H ₂ O: 33.33 mg/mL (33.32 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.0 mL	4.999 mL	9.998 mL
5 mM	0.2 mL	1.0 mL	2.0 mL
10 mM	0.1 mL	0.5 mL	1.0 mL
50 mM	0.02 mL	0.1 mL	0.2 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Lantz KA, et al. Inhibition of PTP1B by trodusquemine (MSI-1436) causes fat-specific weight loss in diet-induced obese mice. *Obesity* (Silver Spring). 2010 Aug;18(8):1516-1523.
2. Qin Z, et al. Chronic stress induces anxiety via an amygdalar intracellular cascade that impairs endocannabinoid signaling. *Neuron*. 2015 Mar 18;85(6):1319-31.
3. Qin Z, et al. Functional properties of Claramine: a novel PTP1B inhibitor and mimetic compound. *Biochem Biophys Res Commun*. 2015 Feb 27;458(1):21-7.

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