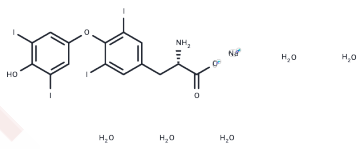
Data Sheet (Cat.No.T15699)

TargetMol

L-Thyroxine sodium salt pentahydrate

Chemical Properties



CAS No. : 6106-07-6

Formula: C15H20I4NNaO9

Molecular Weight: 888.93

Storage: Keep away from moisture,Keep away from direct sunlight
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	L-Thyroxine sodium salt pentahydrate (Sodium levothyroxine pentahydrate) is a thyroid hormone with anticholesterol activity that inhibits the release of thyroid hormones from thyroid cancer nodules and is used in immune and endocrine disorders such as hypothyroidism, myxedema, cretinism and obesity. diseases, such as hypothyroidism, myxedema, cretinism and obesity.
Targets(IC50)	Endogenous Metabolite,Thyroid hormone receptor(THR)
In vivo	In experimental rats fed a 12-week iodine-free diet, levels of triiodothyronine and L-thyroxine were significantly decreased compared to controls on a standard diet. In the low-dose L-Thyroxine sodium salt pentahydrate-treated group, an increase in L-thyroxine levels was observed, while triiodothyronine levels were virtually indistinguishable from those of the control group. Rats receiving high-dose L-Thyroxine sodium salt pentahydrate treatment had significantly increased circulating concentrations of triiodothyronine and L-thyroxine compared to the untreated hypothyroid group, and L-thyroxine levels were significantly increased compared to the control group. [2]

Solubility Information

Solubility	H2O: < 0.1 mg/mL (insoluble) DMSO: 20 mg/mL (22.5 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 (2.25 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1249 mL	5.6247 mL	11.2495 mL
5 mM	0.225 mL	1.1249 mL	2.2499 mL
10 mM	0.1125 mL	0.5625 mL	1.1249 mL
50 mM	0.0225 mL	0.1125 mL	0.225 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

Arici M, et al. Association between genetic polymorphism and levothyroxine bioavailability in hypothyroid patients. Endocr J. 2018 Mar 28;65(3):317-323.

Corriveau S, et al. Levothyroxine treatment generates an abnormal uterine contractility patterns in an in vitro animal model. J Clin Transl Endocrinol. 2015 Sep 9;2(4):144-149.