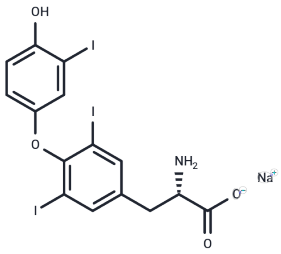
Data Sheet (Cat.No.T1669)

TargetMol

Liothyronine sodium

Chemical Properties



CAS No. : 55-06-1

Formula: C15H11I3NNaO4

Molecular Weight: 672.96

Storage: Store under nitrogen,Store at low temperature
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	Liothyronine Sodium is the sodium salt form of liothyronine, a synthetic form of the levorotatory isomer of the naturally occurring thyroid hormone triiodothyronine (T3). Liothyronine sodium (3,3',5-Triiodo-L-thyronine sodium) binds to nuclear thyroid receptors which then bind to thyroid hormone response elements of target genes. As a result, liothyronine sodium induces gene expression that is required for normal growth and development. Liothyronine sodium is more potent and has a more rapid action than thyroxine (T4).
Targets(IC50)	Endogenous Metabolite,Thyroid hormone receptor(THR)
In vivo	The chemical properties of Liothyronine Sodium are nearly identical to those of Triiodothyronine, acting on thyroid hormone receptors alpha and beta-1. As the most potent form of thyroid hormone, Liothyronine Sodium can increase the basal metabolic rate, affect protein synthesis, and enhance the body's sensitivity to catecholamines (such as adrenaline).

Solubility Information

Solubility	DMSO: 15 mg/mL (22.29 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 (2.97 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	1.486 mL	7.4299 mL	14.8597 mL
5 mM	0.2972 mL	1.486 mL	2.9719 mL
10 mM	0.1486 mL	0.743 mL	1.486 mL
50 mM	0.0297 mL	0.1486 mL	0.2972 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

Timmer DC, et al. J Endocrinol, 2003, 179(2), 217-225.
Jiang P, Cheng B, Wang Z, et al.Distinct effects of physical and functional ablation of brown adipose tissue on T3-dependent pathological cardiac remodeling.Biochemical and Biophysical Research Communications.2024: 150844.
Bernal J, et al. Nat Clin Pract Endocrinol Metab, 2007, 3(3), 249-259.