3,3'-Diiodo-L-thyronine

Cat. No.: HY-129974

CAS No.: 4604-41-5

Molecular Formula: $C_{15}H_{13}I_2NO_4$

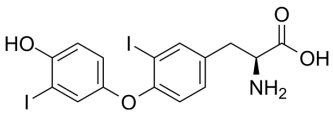
Molecular Weight: 525.08

Target: COX; Endogenous Metabolite

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (190.45 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9045 mL	9.5224 mL	19.0447 mL
	5 mM	0.3809 mL	1.9045 mL	3.8089 mL
	10 mM	0.1904 mL	0.9522 mL	1.9045 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3,3'-Diiodo-L-thyronine (3,3'-T2) is an endogenous metabolite of thyroid hormone. 3,3'-Diiodo-L-thyronine significantly enhances COX activity[1][2].

IC_{50} & Target

Human Endogenous Metabolite	COX

In Vitro

3,3'-Diiodo-L-thyronine (3,3'-T2; 1 μM; 30 min) significantly enhances COX activity[2].

3,3'-Diiodo-L-thyronine of 1 μM has the maximum effect[2].

3,3'-Diiodo-L-thyronine is produced by further degradation of T3 and rT3[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Lorenzini L, et al. Assay of Endogenous 3,5-diiodo-L-thyronine (3,5-T2) and 3,3'-diiodo-L-thyronine (3,3'-T2) in Human Serum: A Feasibility Study. Front Endocrinol (Lausanne). 2019 Feb 19;10:88.

[2]. Lanni A, et al. Rapid stimulation in vitro of rat liver cytochrome oxidase activity by 3,5-diiodo-L-thyronine and by 3,3'-diiodo-L-thyronine. Mol Cell Endocrinol. 1994 Feb;99(1):89-94.

[3]. Chen X, et al. Simultaneous quantification of T4, T3, rT3, 3,5-T2 and 3,3'-T2 in larval zebrafish (Danio rerio) as a model to study exposure to polychlorinated biphenyls. Biomed Chromatogr. 2018 Jun;32(6):e4185.

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