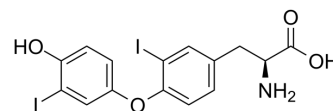


## 3,3'-Diiodo-L-thyronine

<b>Cat. No.:</b>	HY-129974
<b>CAS No.:</b>	4604-41-5
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>13</sub> I <sub>2</sub> NO <sub>4</sub>
<b>Molecular Weight:</b>	525.08
<b>Target:</b>	COX; Endogenous Metabolite
<b>Pathway:</b>	Immunology/Inflammation; Metabolic Enzyme/Protease
<b>Storage:</b>	Powder    -20°C    3 years 4°C        2 years In solvent   -80°C    2 years -20°C    1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (190.45 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	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.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	3,3'-Diiodo-L-thyronine (3,3'-T2) is an endogenous metabolite of thyroid hormone. 3,3'-Diiodo-L-thyronine significantly enhances COX activity <sup>[1][2]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite	COX
<b>In Vitro</b>	3,3'-Diiodo-L-thyronine (3,3'-T2; 1 μM; 30 min) significantly enhances COX activity <sup>[2]</sup> .	

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3,3'-Diiodo-L-thyronine of 1  $\mu$ M has the maximum effect<sup>[2]</sup>.

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

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

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## REFERENCES

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[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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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