

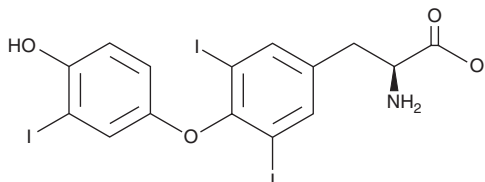
# PRODUCT INFORMATION



## 3,3',5-Triiodo-L-thyronine

Item No. 30996

**CAS Registry No.:** 6893-02-3  
**Formal Name:** O-(4-hydroxy-3-iodophenyl)-3,5-diiodo-L-tyrosine  
**Synonyms:** L-3,3',5-Triiodothyronine, T3, Liothyronine, NSC 80203  
**MF:** C<sub>15</sub>H<sub>12</sub>I<sub>3</sub>NO<sub>4</sub>  
**FW:** 651.0  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 227 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

3,3',5-Triiodo-L-thyronine is supplied as a crystalline solid. A stock solution may be made by dissolving the 3,3',5-triiodo-L-thyronine in the solvent of choice, which should be purged with an inert gas. 3,3',5-Triiodo-L-thyronine is soluble in the organic solvent DMSO at a concentration of approximately 30 mg/ml.

3,3',5-Triiodo-L-thyronine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 3,3',5-triiodo-L-thyronine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 3,3',5-Triiodo-L-thyronine has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

3,3',5-Triiodo-L-thyronine (T3) is a thyroid hormone.<sup>1</sup> It is produced by 5'-monodeiodination of the prohormone thyroxine (T4) in various tissues, including liver and kidney. T3 is an agonist of thyroid hormone receptors TR $\alpha$  and TR $\beta$  (K<sub>d</sub>s = 2.3 nM for both) that modulates diverse biological properties, including metabolism, cardiac function, growth, and redox signaling.<sup>2-5</sup> It also functions as an inhibitor of L-type amino acid transporter 1 (LAT1), inhibiting LAT1-mediated leucine uptake in HEK293 cells when used at a concentration of 10  $\mu$ M.<sup>6</sup>

### References

1. Larsen, P.R., Silva, J.E., and Kaplan, M.M. *Endocr. Rev.* **2**(1), 87-102 (1981).
2. Shiohara, H., Nakamura, T., Kikuchi, N., et al. *Bioorgan. Med. Chem.* **20**(11), 3622-3634 (2012).
3. Cox, M.D., Dalal, S.S., Heard, C.R.C., et al. *J. Nutri.* **114**(9), 1609-1616 (1984).
4. Macchia, P. E., Takeuchi, Y., Kawai, T., et al. *Proc. Nat. Acad. Sci. USA* **98**(1), 349-354 (2001).
5. Videla, L. A., Cornejo, P., Romanque, P., et al. *Sci. World J.* 301494 (2012).
6. Kongpracha, P., Nagamori, S., Wiriyasermkul, P., et al. *J. Pharmacol. Sci.* **133**(2), 96-102 (2017).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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