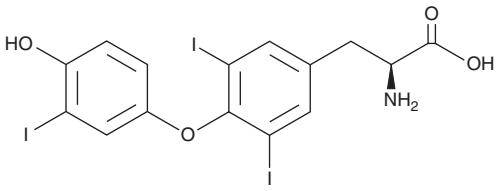
PRODUCT INFORMATION

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:	$C_{15}H_{12}I_3NO_4$
FW:	651.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 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.[1] 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 TRα and TRβ (K_is = 2.3 nM for both) that modulates diverse biological properties, including metabolism, cardiac function, growth, and redox signaling.[2-5] 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 µM.[6]

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).

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