

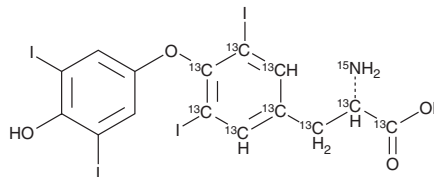
PRODUCT INFORMATION



L-Thyroxine-¹³C₉,¹⁵N

Item No. 25039

CAS Registry No.: 1431868-11-9
Formal Name: O-(4-hydroxy-3,5-diiodophenyl)-3,5-diiodo-L-tyrosine-carboxy,α,β,1,2,3,4,5,6-¹³C₉-¹⁵N
Synonyms: L-T4-¹³C₉,¹⁵N, Levothyroxine-¹³C₉,¹⁵N
MF: C₆[¹³C]₉H₁₁I₄[¹⁵N]O₄
FW: 786.8
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

L-Thyroxine-¹³C₉,¹⁵N is supplied as a solid. A stock solution may be made by dissolving the L-thyroxine-¹³C₉,¹⁵N in the solvent of choice. L-Thyroxine-¹³C₉,¹⁵N is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of L-thyroxine-¹³C₉,¹⁵N in these solvents is approximately 2.5 and 0.14 mg/ml, respectively.

L-Thyroxine-¹³C₉,¹⁵N is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, L-thyroxine-¹³C₉,¹⁵N should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. L-Thyroxine-¹³C₉,¹⁵N has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

L-Thyroxine-¹³C₉,¹⁵N is intended for use as an internal standard for the quantification of L-thyroxine (Item No. 14116) by GC- or LC-MS. L-Thyroxine is a synthetic form of the thyroid hormone thyroxine.¹⁻³ *In vivo*, L-thyroxine (0.9 and 2.7 μg) inhibits synthesis and release of thyrotropin induced by thyrotropin-releasing hormone (Item No. 22917) from the anterior pituitary in mice.¹ It also reverses decreases in levels of circulating thymic serum factor (FTS) and the number of T rosette-forming cells in an old age-induced mouse model of hypothyroidism.^{2,3} Formulations containing L-thyroxine have been used in the treatment of hypothyroidism.

References

1. Bowers, C.Y., Schally, A.V., Reynolds, G.A., *et al.* Interactions of L-thyroxine or L-triiodothyronine and thyrotropin-releasing factor on the release and synthesis of thyrotropin from the anterior pituitary gland of mice. *Endocrinology* **81**(4), 741-747 (1967).
2. Fabris, N., Muzzioli, M., and Mocchegiani, E. Recovery of age-dependent immunological deterioration in Balb/c mice by short-term treatment with L-thyroxine. *Mech. Ageing Dev.* **18**(4), 327-338 (1982).
3. Fabris, N. and Mocchegiani, E. Endocrine control of thymic serum factor production in young-adult and old mice. *Cell Immunol.* **91**(2), 325-335 (1985).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/04/2018

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM