

Iodide Peroxidase

Cat. No. EXWM-0510

Lot. No. (See product label)

Introduction

Description

Thyroid peroxidase catalyses the biosynthesis of the thyroid hormones L-thyroxine and triiodo-L-thyronine. It catalyses both the iodination of tyrosine residues in thyroglobulin (forming mono- and di-iodinated forms) and their coupling to form either L-thyroxine or triiodo-L-thyronine.

Synonyms

thyroid peroxidase; iodotyrosine deiodase; iodinase; iodoperoxidase (heme type); iodide peroxidase-tyrosine iodinase; iodotyrosine deiodinase; moniodotyrosine deiodinase; thyroperoxidase; tyrosine iodinase; TPO

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.11.1.8

CAS No.

9031-28-1

Reaction

(1) $2 \text{ iodide} + \text{H}_2\text{O}_2 + 2 \text{ H}^+ = \text{diiodine} + 2 \text{ H}_2\text{O}$; (2) $[\text{thyroglobulin}]\text{-L-tyrosine} + \text{iodide} + \text{H}_2\text{O}_2 = [\text{thyroglobulin}]\text{-3-iodo-L-tyrosine} + 2 \text{ H}_2\text{O}$; (3) $[\text{thyroglobulin}]\text{-3-iodo-L-tyrosine} + \text{iodide} + \text{H}_2\text{O}_2 = [\text{thyroglobulin}]\text{-3,5-diiodo-L-tyrosine} + 2 \text{ H}_2\text{O}$; (4) $2 [\text{thyroglobulin}]\text{-3,5-diiodo-L-tyrosine} + \text{H}_2\text{O}_2 = [\text{thyroglobulin}]\text{-L-thyroxine} + [\text{thyroglobulin}]\text{-aminoacrylate} + 2 \text{ H}_2\text{O}$; (5) $[\text{thyroglobulin}]\text{-3-iodo-L-tyrosine} + [\text{thyroglobulin}]\text{-3,5-diiodo-L-tyrosine} + \text{H}_2\text{O}_2 = [\text{thyroglobulin}]\text{-3,5,3'-triiodo-L-thyronine} + [\text{thyroglobulin}]\text{-aminoacrylate} + 2 \text{ H}_2\text{O}$

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.