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Product Information

MemDX™ Membrane Protein Human DIO1 (Iodothyronine deiodinase 1) Expressed *in vitro E.coli* expression system, Full Length

Cat. No.: **MPX1483K**
This product is for research use only and is not intended for diagnostic use.

This product is a Human DIO1 membrane protein expressed *in vitro E.coli* expression system. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species
Human

Target Protein
DIO1

Protein Length
Full Length

Protein Class
Oxidoreductase

TMD
1

Sequence
MGLPQPGLWLKRLWVLLEVAVHVVVGKVLLILFPDRVKRNILAMGEKTGMTRNPHFSHDNWIPTFFSTQYFWFVLKVRWQRLEDT

Product Description

Expression Systems
in vitro E.coli expression system

Tag
10xHis tag at the N-terminus

Protein Format
Soluble

Form
Liquid or Lyophilized powder

Buffer

Tris/PBS-based buffer, 6% Trehalose, pH 8.0

Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -70°C or lower. Avoid freeze/thaw cycles.

Target

Target Protein

DIO1

Full Name

Iodothyronine deiodinase 1

Introduction

The protein encoded by this gene belongs to the iodothyronine deiodinase family. It catalyzes the activation, as well as the inactivation of thyroid hormone by outer and inner ring deiodination, respectively. The activation reaction involves the conversion of the prohormone thyroxine (3,5,3',5'-tetraiodothyronine, T4), secreted by the thyroid gland, to the bioactive thyroid hormone (3,5,3'-triiodothyronine, T3) by 5'-deiodination. This protein provides most of the circulating T3, which is essential for growth, differentiation and basal metabolism in vertebrates. This protein is a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Alternatively spliced transcript variants have been found for this gene.

Alternative Names

DIO1; 5DI; TXDI1; type I iodothyronine deiodinase; DIOI; deiodinase, iodothyronine type I; iodothyronine deiodinase type 1; selenoprotein DIO1; thyroxine 5'-deiodinase; thyroxine deiodinase type I (selenoprotein); type 1 DI; type-I 5'-deiodinase; Iodothyronine deiodinase 1

Gene ID

1733

UniProt ID

P49895