Recombinant Full Length Human DIO1 Protein, GST-tagged

Cat. No. DIO1-2559HF **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human DIO1 full-length ORF (NP_998758.1, 1 a.a. - 61 a.a.) recombinant protein with GST-tag at N-terminal.
Species	Human
Source	In Vitro Cell Free System
ProteinLength	61 amino acids
Description	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 is expressed predominantly in the liver and kidney and 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. [provided by RefSeq, Apr 2016]

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Molecular Mass	33.2 kDa
AA Sequence	MGLPQPGLWLKRLWVLLEVAVHVVVGKVLLILFPDRVKRNILAMGEKTGNRPLVLNF GSCT
Applications	Enzyme-linked Immunoabsorbent Assay Western Blot (Recombinant protein) Antibody Production Protein Array
Notes	Best use within three months from the date of receipt of this protein.
Storage	Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.

GENE INFORMATION

Gene Name	DIO1 deiodinase, iodothyronine, type I [Homo sapiens]
Official Symbol	DIO1
Synonyms	DIO1; deiodinase, iodothyronine, type I; TXDI1; type I iodothyronine deiodinase; DIOI; type 1 DI; type-I 5-deiodinase; thyroxine deiodinase type I (selenoprotein); 5DI; MGC130050; MGC130051;
Gene ID	1733
mRNA Refseq	NM_000792
Protein Refseq	NP_000783

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MIM	147892
UniProt ID	P49895

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