

Recombinant Mouse Dio3 Protein, His-tagged

Cat. No. Dio3-1342M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Dio3 Protein (Arg11-Arg277) with N-His tag was expressed in E. coli.
Species	Mouse
Source	E.coli
ProteinLength	Arg11-Arg277
Description	This is an intronless, imprinted gene that is preferentially expressed from the paternal allele in the mouse fetus. The encoded protein belongs to the iodothyronine deiodinase family, and catalyzes the inactivation of thyroid hormone by inner ring deiodination of the prohormone thyroxine (T4) and the bioactive hormone 3,3',5'-triiodothyronine (T3) to inactive metabolites, 3,3',5'-triiodothyronine (RT3) and 3,3'-diiodothyronine (T2), respectively. It is highly expressed in placenta, fetal and neonatal tissues, and thought to prevent premature exposure of developing fetal tissues to adult levels of thyroid hormones. It thus plays a critical role in mammalian development by regulating circulating fetal thyroid hormone concentration. Knockout mice lacking this gene exhibit severe abnormalities related to development and reproduction. This protein is a selenoprotein, containing the rare selenocysteine (Sec) amino acid 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

 Tel: 1-631-559-9269 1-516-512-3133

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	stop signal.
Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 77.0 kDa
Purity	> 97%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	Dio3 deiodinase, iodothyronine type III [<i>Mus musculus</i> (house mouse)]
Official Symbol	Dio3
Synonyms	DIO3; deiodinase, iodothyronine type III;

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Gene ID	107585
mRNA Refseq	NM_172119
Protein Refseq	NP_742117
UniProt ID	Q91ZI8

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