

Recombinant Rat Dio2 protein, His & MBP-tagged

Cat. No. Dio2-8147R Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Dio2 aa. (Ser30~Phe259 (Accession# P70551)) fused with N-terminal His & MBP tag was produced in E. coli cells.
Species	Rat
Source	E.coli
ProteinLength	Ser30~Phe259
Description	The protein encoded by this gene belongs to the iodothyronine deiodinase family. It catalyzes the conversion of prohormone thyroxine (3,5,3',5'-tetraiodothyronine, T4) to the bioactive thyroid hormone (3,5,3'-triiodothyronine, T3) by outer ring 5'-deiodination. This gene is expressed in a few tissues in rat, including brain, pituitary and brown adipose tissue. It is thought to be responsible for the 'local' production of T3, and thus important in influencing thyroid hormone action in these tissues. Studies in rat suggest that this gene may play an important role in the regulation of lipid metabolism and thermogenesis, and in osteoarthritis pathogenesis by enhancing the chondrocyte hypertrophy and inflammatory response. This protein is a selenoprotein containing the rare selenocysteine (Sec) amino acid at its active site, and may contain additional Sec residues. 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.

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

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

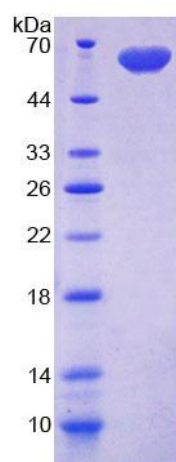
Form	Freeze-dried powder
Molecular Mass	60kDa as determined by SDS-PAGE reducing conditions
Endotoxin	<1.0EU per 1ug (determined by the LAL method)
Purity	>95%
Characteristic	The isoelectric point is 5.8.
Applications	SDS-PAGE; WB; ELISA; IP
Stability	The thermal stability is described by the loss rate of the target protein. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. (Referring from China Biological Products Standard, which was calculated by the Arrhenius equation.) The loss of this protein is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.
Storage Buffer	Supplied as lyophilized form in PBS, pH7.4, containing 5% trehalose, 0.05% sarcosyl.
Reconstitution	Reconstitute in sterile PBS, pH7.2-pH7.4.
GENE INFORMATION	
Gene Name	Dio2 deiodinase, iodothyronine, type II [<i>Rattus norvegicus</i> (Norway rat)]
Official Symbol	Dio2

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Synonyms	5DII; DIOII; type II iodothyronine deiodinase; deiodinase, iodothyronine, type 2; type 2 DI; type-II 5'-deiodinase
Gene ID	65162
mRNA Refseq	NM_031720.4
Protein Refseq	NP_113908.3
UniProt ID	P70551

SDS-PAGE


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