

Product datasheet for **RN208328**

Dio1 (NM_021653) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dio1 (NM_021653) Rat Untagged Clone
Symbol:	Dio1
Synonyms:	5DI; ITDI1; TXDI1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN208328 representing NM_021653 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGGGCTGTCCCAGCTATGGCTGTGGCTGAAGCGGCTTGTGATATTCCTGCAGGTAGCCTTGGAGGTGG
 CTACGGGCAAGGTGCTAATGACACTGTTCCCAGAGAGAGTCAAGCAGAACATCCTGGCCATGGGCCAAAA
 GACCGGAATGACCAGGAATCCCGATTGCCCCCTGACAACTGGGTCCCCACCTTCTTCAGCATCCAGTAC
 TTCTGGTTCGTCCTGAAGGTCCGCTGGCAGAGACTGGAAGACAGGGCTGAGTATGGGGGGCTGGCCCCA
 ACTGCACCGTGGTCCGCCTCTCAGGACAGAAGTGCAACGCTCTGGGATTTCAATCAAGGCAGCAGACCCCT
 GGTGTTGAACTTCGGCAGCTGCACCTGACCTTCAATTTCTCTCAAATTTGACCAAGTCAAGAGACTCGTA
 GACGACTTTCCTCCACAGCTGACTTCCTCATCTTTACATTGAAGAAGCTCACGCCACAGATGGATGGG
 CTTTTAAGAACAACGTGGACATCAGGCAGCACCGAAGCCTCCAGGACCGCTGCGGGCAGCACATCTGCT
 GCTGGCCAGGAGCCCCAGTGTCTGTGGTGGTGGACACAATGCAGAACCAGAGCAGCCAGCTCTATGCA
 GCTCTGCCTGAGAGGCTCTATGTGATACAGGAAGGCAGGATCTGCTACAAGGGTAAACCTGGCCCTTGA
 ACTACAATCCTGAGGAAGTCCGAGCTGTTCTGAAAAGCTTGCATCCACCTGGACACATGCCTCAGTT
CTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-MluI
ACCN:	NM_021653
Insert Size:	774 bp


[View online »](#)

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). The expression of this clone is not guaranteed due to the nature of selenoproteins.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_021653.4, NP_067685.5</u>
RefSeq Size:	2095 bp
RefSeq ORF:	774 bp
Locus ID:	25430
UniProt ID:	<u>P24389</u>
Cytogenetics:	5q34
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>