10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DIO3 Polyclonal Antibody

Catalog # AP69535

Product Information

Application	WB
Primary Accession	P55073
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33947

Additional Information

Gene ID	1735
Other Names	DIO3; ITDI3; TXDI3; Type III iodothyronine deiodinase; 5DIII; DIOIII; Type 3 DI; Type-III 5'-deiodinase
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/20000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

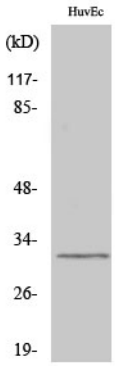
Name	DIO3
Synonyms	ITDI3, TXDI3
Function	Plays a crucial role in the metabolism of thyroid hormones (TH) and has specific roles in TH activation and inactivation by deiodination (PubMed:7593630, PubMed:12586771, PubMed:12746313, PubMed:18821722). Catalyzes the deiodination of L-thyroxine (T4) to 3,3',5'-triiodothyronine (rT3), 3,5,3'-triiodothyronine (T3) to 3,3'-diiodothyronine (3,3'-T2), 3,5-diiodothyronine (3,5-T2) to 3-monoiodothyronine (3-T1), rT3 to 3',5'-diiodothyronine (3',5'-T2) and 3,3'-T2 to 3'-monoiodothyronine (3'-T1) via inner-ring deiodination (IRD) (PubMed:7593630, PubMed:12586771, PubMed:12746313, PubMed:18821722, PubMed:18339710). Catalyzes the deiodination of 3-T1 to L-thyronine (T0) via outer-ring deiodination (ORD) (PubMed:18821722). Catalyzes the tyrosyl ring deiodinations of 3,3',5,5'-tetraiodothyronamine, 3,3',5'-triiodothyronamine, 3,5,3'- triiodothyronamine, 3,5-diiodothyronamine, 3,3'-diiodothyronamine and 3-iodothyronamine (PubMed:18339710).

Cellular Location	Cell membrane; Single-pass type II membrane protein. Endosome membrane; Single-pass type II membrane protein
Tissue Location	Expressed in placenta and several fetal tissues.

Background

Responsible for the deiodination of T4 (3,5,3',5'- tetraiodothyronine) into RT3 (3,3',5'-triiodothyronine) and of T3 (3,5,3'-triiodothyronine) into T2 (3,3'-diiodothyronine). RT3 and T2 are inactive metabolites. May play a role in preventing premature exposure of developing fetal tissues to adult levels of thyroid hormones. Can regulate circulating fetal thyroid hormone concentrations throughout gestation. Essential role for regulation of thyroid hormone inactivation during embryological development.

Images



Western Blot analysis of various cells using DIO3 Polyclonal Antibody