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DIO2 Rabbit pAb

Catalog # AP99787

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q92813
Other Accession	Q92813
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	30552
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DIO2
Epitope Specificity	101-200/273
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the iodothyronine deiodinase family.
SUBUNIT	Interacts with USP20 and USP33. Interacts with MARCH6.
Post-translational modifications	Ubiquitinated by MARCH6, leading to its degradation by the proteasome. Deubiquitinated by USP20 and USP33.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	DIO2 belongs to the iodothyronine deiodinase family and is responsible for the deiodination of T4 (3,5,3',5'-tetraiodothyronine) into T3 (3,5,3'-triiodothyronine). It is essential for providing the brain with appropriate levels of T3 during the critical period of development. DIO2 is expressed in heart, skeletal muscle, placenta, fetal brain and several regions of the adult brain. There are two named isoforms.

Additional Information

Gene ID	1734
Other Names	5DII; DIOII; D2; SELENOY; SelY; TXDI2; IOD2_BOVIN; DIO2; Type 2 DI; Type-II 5'-deiodinase; 1.21.99.4; IOD2_HUMAN; ITDI2; IOD2_MOUSE; IOD2_PIG; IOD2_RAT; iodothyronine deiodinase 2; deiodinase, iodothyronine type II; thyroxine deiodinase, type II; deiodonase-2; deiodinase-2; selenoprotein Y
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	DIO2
Synonyms	ITDI2, TXDI2
Function	Plays a crucial role in the metabolism of thyroid hormones (TH) and has specific roles in TH activation and inactivation by deiodination (PubMed:12586771, PubMed:11108274, PubMed:10403186, PubMed:18821722). Catalyzes the deiodination of L-thyroxine (T4) to 3,5,3'-triiodothyronine (T3), 3,3',5'-triiodothyronine (rT3) to 3,3'-diiodothyronine (3,3'-T2) and 3',5'-diiodothyronine (3',5'-T2) to 3'-monoiodothyronine (3'-T1) via outer-ring deiodination (ORD) (PubMed:12586771, PubMed:11108274, PubMed:10403186, PubMed:18821722, PubMed:18339710). Catalyzes the phenolic ring deiodinations of 3,3',5'- triiodothyronamine and 3',5'- diiodothyronamine (PubMed:18339710).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type III membrane protein
Tissue Location	Isoform 1 is expressed in the lung, trachea, kidney, heart, skeletal muscle, placenta, fetal brain and several regions of the adult brain (PubMed:11165050, PubMed:8755651). Isoform 2 is expressed in the brain, heart, kidney and trachea (PubMed:11165050)

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