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DIO2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8718c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q92813
Other Accession	Q6QN12
Reactivity	Human, Rat, Mouse
Predicted	Pig
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22907
Calculated MW	30552
Antigen Region	165-191

Additional Information

Gene ID	1734
Other Names	Type II iodothyronine deiodinase, 5DII, DIOII, Type 2 DI, Type-II 5'-deiodinase, DIO2, ITDI2, TXDI2
Target/Specificity	This DIO2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 165-191 amino acids of human DIO2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DIO2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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)

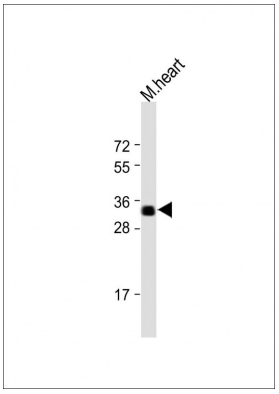
Background

DIO2 belongs to the iodothyronine deiodinase family. It activates thyroid hormone by converting the prohormone thyroxine (T4) by outer ring deiodination (ORD) to bioactive 3,3',5-triiodothyronine (T3).

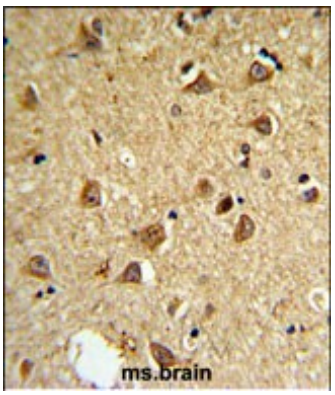
References

He,B.,et.al., Prog. Neuropsychopharmacol. Biol. Psychiatry 33 (6), 986-990 (2009)
Heemstra,K.A., et.al., J. Clin. Endocrinol. Metab. 94 (6), 2144-2150 (2009)

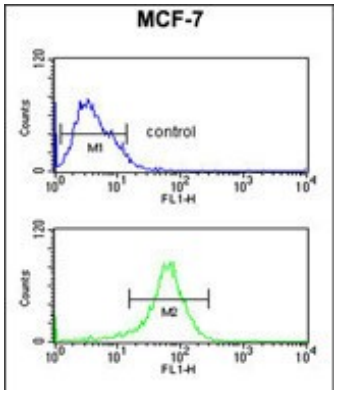
Images



All lanes : Anti-DIO2 Antibody (Center) at 1:1000 dilution Lane 1: mouse heart tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 32kDa Blocking/Dilution buffer: 5% NFDM/TBST.



DIO2 Antibody (Center) (Cat. #AP8718c) IHC analysis in formalin fixed and paraffin embedded mouse brain followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the mouse DIO2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



DIO2 Antibody (Center) (Cat. #AP8718c) flow cytometric analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.