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DIO2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8718c

Specification

DIO2 Antibody (Center) - Product Information

Application	**WB, FC, IHC-P,E**
Primary Accession	Q92813
Other Accession	Q6QN12
Reactivity	**Human, Mouse**
Predicted	**Pig**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**165-191**

DIO2 Antibody (Center) - 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~~1:500-2000
FC~~1:10~50
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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.

DIO2 Antibody (Center) - 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. Catalyzes the conversion of T4 (L-thyroxine/3,5,3',5'- tetraiodothyronine) to T3 (3,5,3'-triiodothyronine) via outer-ring deiodination (ORD) (PubMed:12586771, PubMed:11108274, PubMed:10403186). Catalyzes the conversion of rT3 (3,3',5'-triiodothyronine) to T2 (3,3'- diiodothyronine) via ORD (PubMed:11108274). Catalyzes the conversion 3',5'-T2 (3,5-diiodothyronine) to 3-T1 (3-monoiodothyronine) via ORD (PubMed:18821722).

Cellular Location
Endoplasmic reticulum membrane; Single-pass type III membrane protein

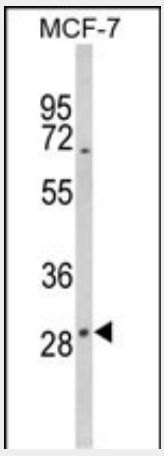
Tissue Location
Isoform 1 is expressed in the lung, trachea, kidney, heart, skeletal muscle, placenta, fetal brain and several regions of the adult brain (PubMed:11165050, PubMed:8755651). Isoform 2 is expressed in the brain, heart, kidney and trachea (PubMed:11165050)

DIO2 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

DIO2 Antibody (Center) - Images



Western blot analysis of DIO2 Antibody (Center) (Cat. #AP8718c) in MCF-7 cell line lysates (35ug/lane). DIO2 (arrow) was detected using the purified Pab.

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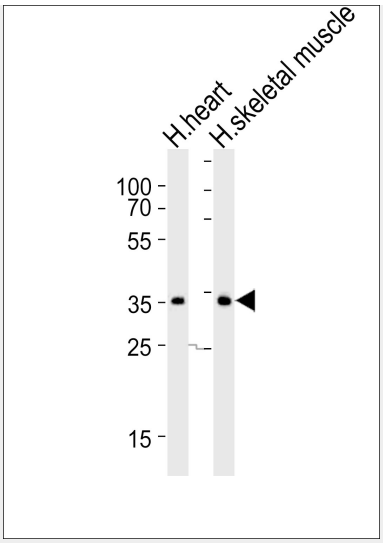
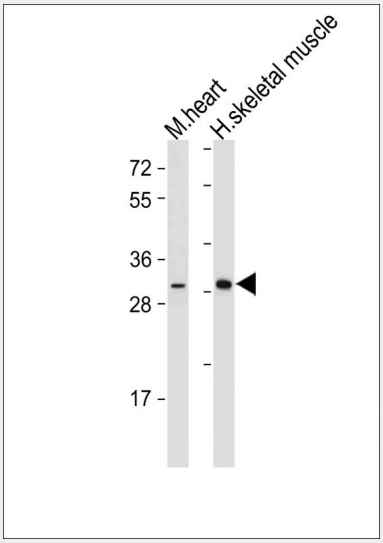
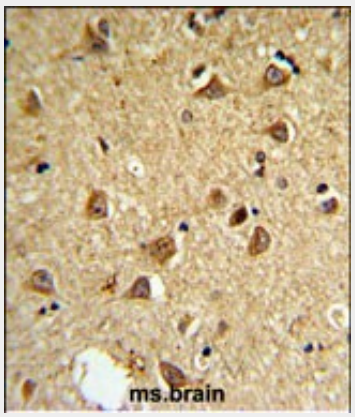


Western blot analysis of lysates from human heart and human skeletal muscle tissue lysate (from left to right), using DIO2 Antibody (Center)(Cat. #AP8718c). AP8718c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



All lanes : Anti-DIO2 Antibody (Center) at 1:500-2000 dilution Lane 1: Mouse heart tissue lysate Lane 2: Human skeletal muscle tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 31 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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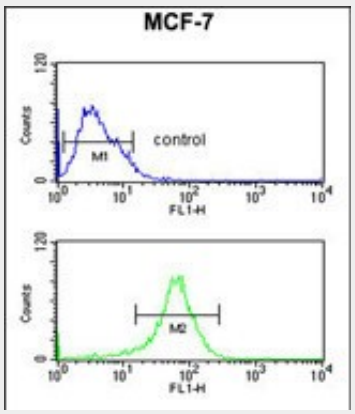
DIO2 Antibody (Center) (Cat. #AP8718c) IHC analysis in formalin fixed and paraffin embedded mouse brain followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the mouse DIO2 Antibody (Center) for immunohistochemistry. Clinical relevance has not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

DIO2 Antibody (Center) - 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).

DIO2 Antibody (Center) - 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)