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Goat Anti-DIO2 Antibody

Peptide-affinity purified goat antibody

Catalog # AF1319a

Specification

Goat Anti-DIO2 Antibody - Product Information

Application	**IHC**
Primary Accession	Q92813
Other Accession	NP_001007024, 1734, 13371 (mouse), 65162 (rat)
Reactivity	**Mouse**
Predicted	**Human, Rat, Pig**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**30552**

Goat Anti-DIO2 Antibody - Additional Information

Gene ID 1734

Other Names
Type II iodothyronine deiodinase, 1.97.1.10, 5DII, DIOII, Type 2 DI, Type-II 5'-deiodinase, DIO2, ITDI2, TXDI2

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-DIO2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-DIO2 Antibody - Protein Information

Name DIO2

Synonyms ITDI2, TXDI2

Function
Responsible for the deiodination of T4 (3,5,3',5'- tetraiodothyronine) into T3 (3,5,3'-triiodothyronine). Essential for providing the brain with appropriate levels of T3 during the

critical period of development.

Cellular Location
Membrane; Single-pass membrane protein

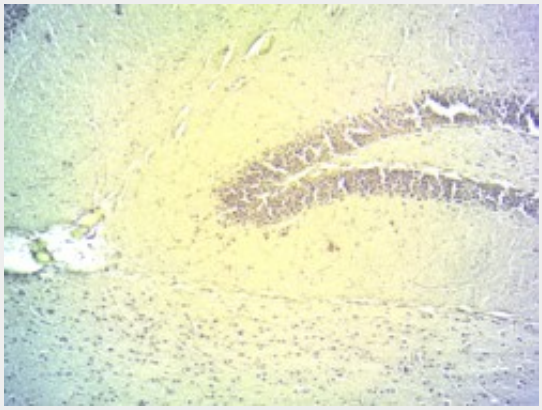
Tissue Location
Isoform 1 is expressed in the lung, trachea, kidney, heart, skeletal muscle, placenta, fetal brain and several regions of the adult brain (PubMed:11165050, PubMed:8755651). Isoform 2 is expressed in the brain, heart, kidney and trachea (PubMed:11165050)

Goat Anti-DIO2 Antibody - 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

Goat Anti-DIO2 Antibody - Images



AF1319a (2 µg/ml) staining of PFA-fixed cryo-sectioned Mouse Hippocampus. Microwaved antigen retrieval with citrate buffer pH 4.5, HRP-staining.

Goat Anti-DIO2 Antibody - Background

The protein encoded by this gene 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). It is highly expressed in the thyroid, and may contribute significantly to the relative increase in thyroidal T3 production in patients with Graves disease and thyroid adenomas. This protein contains selenocysteine (Sec) residues encoded by the UGA codon, which normally signals translation termination. The 3' UTR of Sec-containing genes have a common stem-loop structure, the sec insertion sequence (SECIS), which is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternative splicing results in multiple transcript variants encoding different isoforms.

Goat Anti-DIO2 Antibody - References

Association of the type 2 deiodinase Thr92Ala polymorphism with type 2 diabetes: case-control study and meta-analysis. Dora JM, et al. Eur J Endocrinol, 2010 Sep. PMID 20566590.
Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. Mol Med, 2010 Jul-Aug. PMID 20379614.
Regional decrease of subcutaneous adipose tissue in patients with type 2 familial partial lipodystrophy is associated with changes in thyroid hormone metabolism. Lado-Abeal J, et al. Thyroid, 2010 Apr. PMID 20373986.
The type 2 deiodinase Thr92Ala polymorphism is associated with increased bone turnover and decreased femoral neck bone mineral density. Heemstra KA, et al. J Bone Miner Res, 2010 Jun. PMID 20200941.
Association study between polymorphisms in selenoprotein genes and susceptibility to Kashin-Beck disease. Xiong YM, et al. Osteoarthritis Cartilage, 2010 Jun. PMID 20178852.