

Goat Anti-DIO2 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1319a**Specification**

Goat Anti-DIO2 Antibody - Product Information

Application	IHC, E
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

Dilution

IHC~~1:100~500

E~~N/A

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

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)

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 Cytometry](#)
- [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.