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IYD Rabbit pAb

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Catalog # AP56599

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q6PHW0
Predicted	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33360
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human IYD
Epitope Specificity	151-250/289
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane.
DISEASE	Defects in IYD are the cause of congenital hypothyroidism due to dyshormonogenesis type 4 (CHDH4) [MIM:274800]; also known as genetic defect in thyroid hormonogenesis type 4 or iodotyrosine dehalogenase deficiency or deiodinase deficiency. Patients with this defect present a phenotype of severe hypothyroidism, goiter, excessive levels of iodotyrosine in serum and urine, and variable mental deficits derived from unrecognized hypothyroidism.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes an enzyme that catalyzes the oxidative NADPH-dependent deiodination of mono- and diiodotyrosine, which are the halogenated byproducts of thyroid hormone production. The N-terminus of the protein functions as a membrane anchor. Mutations in this gene cause congenital hypothyroidism due to dyshormonogenesis type 4, which is also referred to as deiodinase deficiency, or iodotyrosine dehalogenase deficiency, or thyroid hormonogenesis type 4. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2009]

Additional Information

Gene ID	389434
Other Names	Iodotyrosine deiodinase 1, IYD-1, 1.21.1.1, Iodotyrosine dehalogenase 1 {ECO:0000303|PubMed:15289438, ECO:0000303|Ref.2}, IYD {ECO:0000303|PubMed:25395621}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

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	IYD {ECO:0000303|PubMed:25395621}
Function	Catalyzes the dehalogenation of halotyrosines such as 3- bromo-L-tyrosine, 3-chloro-L-tyrosine, 3-iodo-L-tyrosine and 3,5- diiodo-L-tyrosine (PubMed:15289438, PubMed:18434651, PubMed:25395621, PubMed:28157283). During thyroid hormone biosynthesis, facilitates iodide salvage by catalysing the oxidative NADPH-dependent deiodination of the halogenated by-products of thyroid hormone production, monoiodotyrosine (L-MIT) and diiodotyrosine (L-DIT) (PubMed:15289438, PubMed:18434651). The scavanged iodide can then reenter the hormone- producing pathways (PubMed:15289438, PubMed:18434651). Acts more efficiently on 3-iodo-L-tyrosine than 3,5-diiodo-L-tyrosine (PubMed:15289438).
Cellular Location	Cell membrane; Single-pass membrane protein. Cytoplasmic vesicle membrane
Tissue Location	Expressed at a high level in thyroid gland (at protein level). Expressed at a high level in thyroid gland and at lower level in kidney and trachea.

Background

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.