Anti-Thyroid Hormone Receptor alpha (THRA) (RABBIT) Antibody - 600-401-A38

Code: 600-401-A38 **Size:** 100 µg

Product Description: Anti-Thyroid Hormone Receptor alpha (THRA) (RABBIT) Antibody - 600-401-A38

Concentration: 1.0mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	THRA
Species Reactivity	human
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	rabbit anti-THRA antibody, rabbit anti-Thyroid hormone receptor alpha antibody, Nuclear receptor subfamily 1 group A member 1, c-erbA-alpha, c-erbA-1, V-erbA-related protein 7, EAR7, ERBA1, NR1A1, THRA1, THRA2
Application Note	This affinity purified antibody has been tested for use in ELISA and western blotting.
Background	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Thyroid hormone receptor alpha is a nuclear hormone receptor with high affinity for the hormone triiodo-thyronine. THRA is one of the several receptors for thyroid hormone, and has been shown to mediate the biological activities of thyroid hormone. Knockout studies in mice suggest that the different receptors, while having a certain extent of redundancy, may mediate different functions of thyroid hormone. THRA interacts with NCOA3 and NCOA6 co-activators, leading to a strong increase in transcription of target genes. THRA is localized within the nucleus and has been found to exist as 4 isoforms originating from alternative splicing variants. This antibody recognizes THRA isoform 1. Isoform 1 has a distinct C-terminus compared to isoform 2.
Purity And Specificity	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human THRA protein. A BLAST analysis was used to suggest cross-reactivity with THRA from mouse, human and rat based on a 100% homology with the immunizing sequence. Cross-reactivity with THRA from other sources has not been determined.
Assay Dilutions	User Optimized
ELISA	1:300,000
Western Blot	1:500 - 1:2,000
Immunohistochemistry	1:200
IF Microscopy	1:200
Other Assays	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the amino terminus of human THRA isoform 1 protein.
General Reference	Ying,H., Araki,O., Furuya,F., Kato,Y. and Cheng,S.Y. (2007) Impaired adipogenesis caused by a mutated thyroid hormone alpha1 receptor. Mol. Cell. Biol. 27 (6), 2359-2371. Nascimento,A.S., Dias,S.M., Nunes,F.M., Aparicio,R., Ambrosio,A.L., Bleicher,L., Figueira,A.C., Santos,M.A., de Oliveira Neto,M., Fischer,H., Togashi,M., Craievich,A.F., Garratt,R.C., Baxter,J.D., Webb,P. and Polikarpov,I. (2006) Structural rearrangements in the thyroid hormone receptor hinge domain and their putative role in the receptor function. J. Mol. Biol. 360 (3), 586-598. Wan,W., Farboud,B. and Privalsky,M.L. (2005) Pituitary resistance to thyroid hormone syndrome is associated with T3 receptor mutants that selectively impair beta2 isoform function. Mol. Endocrinol. 19 (6), 1529-1542.

Specific Reference

López-Juárez, A., Remaud, S., Hassani, Z., Jolivet, P., Pierre Simons, J., Sontag, T., ... & Demeneix, B. A. (2012). Thyroid Hormone Signaling Acts as a Neurogenic Switch by Repressing Sox2 in the Adult Neural Stem Cell Niche. Cell stem cell, 10(5), 531-543.

Contreras-Jurado C, García-Serrano L, Martínez-Fernández M, Ruiz-Llorente L, Paramio JM, Aranda A. (2014) Impaired hair growth and wound healing in mice lacking thyroid hormone receptors. PLoS One. 2014 Sep 25;9(9):e108137. doi: 10.1371/journal.pone.0108137. eCollection 2014.

Mishra A, Zhu XG, Ge K, Cheng SY. (2010) Adipogenesis is differentially impaired by thyroid hormone receptor mutant isoforms. J Mol Endocrinol. 2010 Apr;44(4):247-55. doi: 10.1677/JME-09-0137. Epub 2010 Jan 15.

Related Products

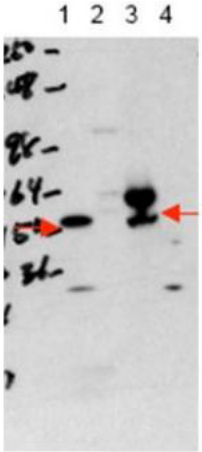
100-401-218	Anti-Erk2 (RABBIT) Antibody - 100-401-218
600-401-281	Anti-MAPKAP Kinase 2 (RABBIT) Antibody - 600-401-281
600-401-A38S	Anti-Thyroid Hormone Receptor alpha (THRA) (RABBIT) Antibody - 600-401-A38S
600-401-A96	Anti-Thyroid Hormone Receptor ß1 (THRB1) (RABBIT) Antibody - 600-401-A96

Related Links

	NCBI - 40806160
http://www.ncbi.nlm.nih.gov/protein/40806160	
UniProtKB - P10827-2	http://www.uniprot.org/uniprot/P10827-2
	GeneID - 7067

Images

1 Western blot using Rockland's affinity purified anti-THRA antibody shows detection of purified recombinant THRA (lane 1) and THRA present in a 293 cell lysate after transient transfection with THRA (lane 3). No staining is evident in lysates from mock-transfected 293 cells (lane 2). Endogenous THRA is not detected in mouse brain whole cell lysate (lane 4). Nuclear extracts may be required to detect endogenous THRA as the protein localizes within the nucleus. The band at ~55 kDa, indicated by the arrowhead, corresponds to THRA. Personal communication, S. Cheng and H. Ying, NCI, Bethesda, MD.



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