

Rabbit Retinoic Acid Receptor alpha Polyclonal Antibody | anti-RARA antibody

Phospho-Retinoic Acid Receptor alpha (Ser77) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320741	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Retinoic Acid Receptor alpha; Polyclonal Antibody; Phospho-Retinoic Acid Receptor alpha (Ser77) Antibody; NR1B1; Nuclear mitotic apparatus protein retinoic acid receptor alpha fusion protein; Nuclear receptor subfamily 1 group B member 1; Nucleophosmin retinoic acid receptor alpha fusion protein NPM RAR long form; RAR alpha; RAR; RAR-alpha; rara; RARA_HUMAN; RARalpha; RARalpha1; Retinoic acid nuclear receptor alpha variant 1; Retinoic acid nuclear receptor alpha variant 2; Retinoic acid receptor alpha; Retinoic acid receptor alpha polypeptide; anti-RARA antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-Retinoic Acid Receptor alpha (Ser77) antibody detects endogenous levels of Retinoic Acid Receptor alpha only when phosphorylated at Sersine 77
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	462
Applicable Applications for anti-RARA antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Retinoic Acid Receptor alpha around the phosphorylation site of Sersine 77
Subcellular Location	Nucleus. Cytoplasm. Nuclear localization depends on ligand binding, phosphorylation and sumoylation. Translocation to the nucleus in the absence of ligand is dependent on activation of PKC and the downstream MAPK phosphorylation.
Conjugation	Unconjugated
Epitope	Phospho Ser77
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA320741 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)

AAA320741 at 1/200 staining human Testis tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis on Jurkat cell lysate using Phospho-Retinoic Acid Receptor alpha (Ser77) Antibody, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-RARA antibody

Function: Receptor for retinoic acid. Retinoic acid receptors bind as heterodimers to their target response elements in response to their ligands, all-trans or 9-cis retinoic acid, and regulate gene expression in various biological processes. The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5. In the absence of ligand, the RXR-RAR heterodimers associate with a multiprotein complex containing transcription corepressors that induce histone acetylation, chromatin condensation and transcriptional suppression. On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation. RARA plays an essential role in the regulation of retinoic acid-induced germ cell development during spermatogenesis. Has a role in the survival of early spermatocytes at the beginning prophase of meiosis. In Sertoli cells, may promote the survival and development of early meiotic prophase spermatocytes. In concert with RARG, required for skeletal growth, matrix homeostasis and growth plate function (By similarity).

Subunit Structure: Heterodimer; with RXRA. Binds DNA preferentially as a heterodimer. Interacts with CDK7 (By similarity). Interacts with coactivators NCOA3 and NCOA6. Interacts with NCOA7; the interaction requires ligand-binding. Interacts (via the ligand-binding domain) with PRAME; the interaction is ligand (retinoic acid)-dependent. Interacts with AKT1; the interaction phosphorylates RARA and represses transactivation. Interacts with PRKAR1A; the interaction negatively regulates RARA transcriptional activity. Interacts with NCOR1 and NCOR2. Interacts with PRMT2. Interacts with LRIF1. Interacts with ASXL1 and NCOA1. Interacts with ACTN4.

Post-translational Modifications: Phosphorylated on serine and threonine residues. Phosphorylation does not change during cell cycle. Phosphorylation on Ser-77 is crucial for transcriptional activity (By similarity). Phosphorylation by AKT1 is required for the repressor activity but has no effect on DNA binding, protein stability nor subcellular localization. Phosphorylated by PKA in vitro. This phosphorylation on Ser-219 and Ser-369 is critical for ligand binding, nuclear localization and transcriptional activity in response to FSH signaling. Sumoylated with SUMO2, mainly on Lys-399 which is also required for SENP6 binding. On all-trans retinoic acid (ATRA) binding, a conformational change may occur that allows sumoylation on two additional site, Lys-166 and Lys-171. Probably desumoylated by SENP6. Sumoylation levels determine nuclear localization and regulate ATRA-mediated transcriptional activity. Trimethylation enhances heterodimerization with RXRA and positively modulates the transcriptional activation. Ubiquitinated.

Similarity: Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain. Belongs to the nuclear hormone receptor family. NR1 subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4506419
NCBI GeneID	5914
NCBI Accession #	NP_000955.1
NCBI GenBank Nucleotide #	NM_000964.3

UniProt Accession #	P10276 ; P78456 ; Q13440 ; Q13441 ; Q96S41 ; Q9NQS0 ; B8Y636
Molecular Weight	Observed: 45 kDa Predicted: 51 kDa
NCBI Official Full Name	retinoic acid receptor alpha isoform 1
NCBI Official Synonym Full Names	retinoic acid receptor alpha
NCBI Official Symbol	RARA
NCBI Official Synonym Symbols	RAR; NR1B1
NCBI Protein Information	retinoic acid receptor alpha
UniProt Protein Name	Retinoic acid receptor alpha
UniProt Gene Name	RARA
UniProt Synonym Gene Names	NR1B1; RAR-alpha

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/retinoic-acid-receptor-alpha-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/320741>