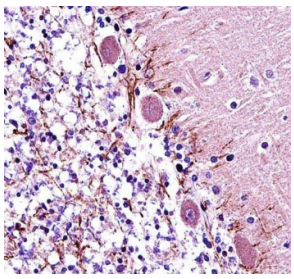
RARA Antibody / Retinoic Acid Receptor Alpha Antibody (F54372)

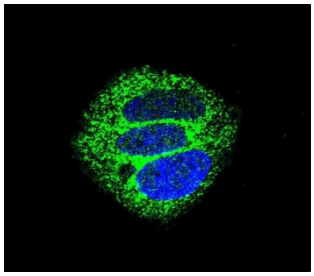
Catalog No.	Formulation	Size
F54372-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54372-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

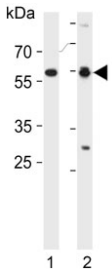
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P10276
Applications	Western blot: 1:500-1:2000 Flow cytometry: 1:25 (1x10e6 cells) Immunohistochemistry (FFPE): 1:25 Immunofluorescence: 1:25
Limitations	This RARA Antibody / Retinoic Acid Receptor Alpha Antibody is available for research use only.



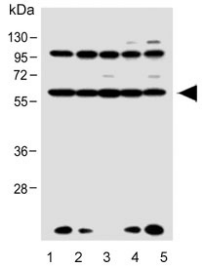
RARA Antibody IHC in Mouse Cerebellum. Immunohistochemical staining of FFPE mouse cerebellum tissue using the Retinoic Acid Receptor Alpha Antibody. Brown DAB staining is observed in cells along the Purkinje cell layer and adjacent cerebellar tissue, with variable cytoplasmic and pericellular labeling. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer (pH 6.0) for 20 minutes, followed by cooling before staining.



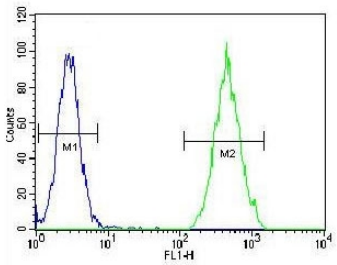
RARA Antibody IF in Human MCF7 Cells. Immunofluorescence analysis of fixed and permeabilized human MCF7 cells using the Retinoic Acid Receptor Alpha Antibody (green), with DAPI nuclear counterstaining (blue). RARA-associated fluorescence is predominantly cytoplasmic, with a granular distribution surrounding the nuclei.



RARA Antibody WB in Human HL60 and Mouse Testis. Western blot analysis of human HL60 (lane 1) and mouse testis (lane 2) lysates using the Retinoic Acid Receptor Alpha Antibody. A prominent band is detected at approximately 58-60 kDa in both samples, above the predicted molecular weight of RARA (~51 kDa). Additional lower-molecular-weight bands are visible in the mouse testis sample.



RARA Antibody WB in Five Human Cell Lines. Western blot analysis of human HL60 (lane 1), MCF7 (lane 2), HepG2 (lane 3), HeLa (lane 4), and T-47D (lane 5) lysates using the Retinoic Acid Receptor Alpha Antibody. A prominent band is detected at approximately 58-60 kDa across all five cell lines, above the predicted molecular weight of RARA (~51 kDa). Additional bands are observed near 95-100 kDa in all samples.



RARA Antibody FACS in Human HeLa Cells. Flow cytometry analysis of human HeLa cells using the Retinoic Acid Receptor Alpha Antibody. The antibody-stained population (green) shows a pronounced rightward fluorescence shift relative to the isotype control (blue), indicating detection of RARA-associated staining.

Description

RARA Antibody / Retinoic Acid Receptor Alpha Antibody recognizes a ligand-dependent nuclear receptor encoded by the RARA gene. Retinoic acid receptor alpha belongs to the nuclear receptor superfamily and functions as a transcription factor that regulates gene expression in response to retinoic acid, a biologically active derivative of vitamin A. RARA contributes to embryonic development, cellular differentiation, proliferation, and tissue homeostasis through its control of retinoic acid-responsive genes.

RARA typically forms heterodimers with retinoid X receptors (RXRs), allowing the complex to bind specific DNA sequences known as retinoic acid response elements (RAREs). In the absence of an activating ligand, RARA-RXR complexes can recruit transcriptional corepressors and histone deacetylases, maintaining target genes in a relatively repressed state. Binding of all-trans retinoic acid promotes conformational changes that favor the release of corepressors and recruitment of transcriptional coactivators. These interactions help coordinate chromatin remodeling and transcriptional activation in response to developmental and physiological signals.

Retinoic acid signaling is particularly important during hematopoietic differentiation, including the maturation of granulocytic cells. RARA regulates transcriptional programs that influence the transition from immature progenitors to differentiated cell populations. Its activity also contributes to epithelial differentiation, nervous system development, and the maintenance of tissue-specific gene expression. Alternative promoter usage and transcript processing generate RARA isoforms with distinct regulatory regions, potentially influencing receptor expression and transcriptional responses in different cellular contexts.

RARA is closely associated with acute promyelocytic leukemia (APL), a subtype of acute myeloid leukemia characterized by impaired myeloid differentiation. The PML::RARA fusion protein, produced by the t(15;17) chromosomal translocation, disrupts normal retinoic acid-dependent transcriptional regulation and contributes to the accumulation of abnormal promyelocytes. Pharmacological concentrations of all-trans retinoic acid can overcome aspects of this differentiation block, forming an important component of APL treatment. Additional RARA rearrangements involving other fusion

partners have also been described. NSJ Bioreagents offers this RARA Antibody for investigating nuclear receptor signaling, transcriptional regulation, and the molecular mechanisms underlying retinoid-dependent differentiation.

Explore additional antibodies targeting nuclear receptors, transcriptional regulators, and proteins involved in ligand-dependent signaling in our Signal Transduction Antibodies collection.

Application Notes

The stated application concentrations are suggested starting points. Titration of the RARA Antibody / Retinoic Acid Receptor Alpha Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 322-349 from the human protein were used as the immunogen for the RAR alpha antibody.

Storage

Aliquot the RARA Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

RAR alpha antibody, Retinoic acid receptor alpha antibody, Nuclear receptor subfamily 1 group B member 1 antibody, NR1B1 antibody

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