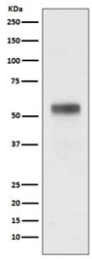
Retinoic Acid Receptor Alpha Antibody GBC-18 / RARA Monoclonal Antibody [clone GBC-18] (RQ5319)

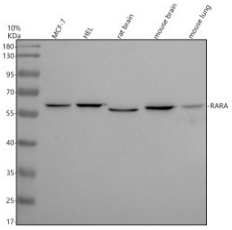
Catalog No.	Formulation	Size
RQ5319	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	GBC-18
Purity	Affinity purified
UniProt	P10276
Applications	Western blot: 1:500-1:1000
Limitations	This Retinoic Acid Receptor Alpha Antibody GBC-18 / RARA Monoclonal Antibody is available for research use only.



Retinoic Acid Receptor Alpha Antibody WB in Human MCF-7 Cells. Western blot analysis of human MCF-7 cell lysate using the RARA Monoclonal Antibody GBC-18. A prominent band is detected at approximately 55-60 kDa, above the predicted molecular weight of RARA (~51 kDa).



Retinoic Acid Receptor Alpha Antibody WB in Human and Rodent Samples. Western blot analysis of human MCF-7 (lane 1) and HEL (lane 2) whole cell lysates, rat brain (lane 3), mouse brain (lane 4), and mouse lung (lane 5) lysates using the RARA Monoclonal Antibody GBC-18 at 1:500. Samples containing 30 ug of total protein per lane were separated by 10% SDS-PAGE under reducing conditions. A prominent band is detected at approximately 55-60 kDa across all five samples, above the predicted molecular weight of RARA (~51 kDa).

Description

Retinoic Acid Receptor Alpha Antibody GBC-18 / RARA Monoclonal Antibody recognizes RARA, a ligand-regulated transcription factor belonging to the nuclear receptor superfamily. RARA is one of three major retinoic acid receptor subtypes, alongside RARB and RARG, and mediates cellular responses to retinoic acid, an active metabolite of vitamin A. Its activity influences developmental gene expression, cell differentiation, and the maintenance of specialized cellular functions through interactions with DNA and transcriptional regulatory proteins.

RARA functions primarily through heterodimerization with retinoid X receptors (RXRs). These complexes recognize retinoic acid response elements within regulatory regions of target genes. In the absence of an activating ligand, RARA-associated complexes recruit corepressor proteins, including NCOR and SMRT, which help maintain transcriptional repression through interactions with histone deacetylases. Retinoic acid binding changes receptor conformation and promotes the recruitment of coactivator complexes, allowing transcriptional responses that depend on chromatin accessibility and cellular context. This regulatory mechanism connects extracellular retinoid availability with changes in gene expression.

RARA is especially important in hematopoiesis, where retinoic acid signaling contributes to the maturation of myeloid progenitor cells. Its transcriptional activity helps coordinate differentiation-associated genes and limits the persistence of immature cellular states under appropriate conditions. RARA also participates in epithelial development and tissue maintenance, with receptor activity influenced by ligand concentration, receptor abundance, and interactions with other nuclear regulatory proteins. Multiple RARA transcript variants have been described, reflecting differences in promoter usage and regulatory sequences.

The clinical significance of RARA is particularly evident in acute promyelocytic leukemia (APL). Most cases involve the PML::RARA fusion protein generated by a chromosomal translocation, which disrupts normal transcriptional regulation and prevents promyelocyte maturation. All-trans retinoic acid can promote differentiation in susceptible APL cells, illustrating the importance of RARA-dependent transcriptional control. Less common RARA fusion partners have also been identified, and their responses to retinoid treatment can differ. Research involving RARA therefore extends beyond normal developmental signaling to mechanisms of transcriptional repression, leukemogenesis, and therapeutic differentiation. The Retinoic Acid Receptor Alpha Antibody GBC-18 provides a monoclonal option for studying this nuclear receptor and its involvement in retinoid-responsive gene regulation.

Explore our RARA Antibody for additional research options targeting retinoic acid receptor alpha, with validation data across multiple cell lines and tissue samples.

Application Notes

Optimal dilution of the Retinoic Acid Receptor Alpha Antibody GBC-18 / RARA Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Retinoic Acid Receptor alpha / RARA was used as the immunogen for the Retinoic Acid Receptor Alpha Antibody GBC-18.

Storage

Store the Retinoic Acid Receptor Alpha Antibody GBC-18 at -20oC.

Alternate Names

RAR alpha antibody, RAR-alpha antibody, Retinoic acid receptor alpha antibody, Nuclear retinoic acid receptor alpha antibody

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