

**KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1657****Specification****KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	<a href="#">P10276</a>
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 51 kDa , observed , 55 kDa
Gene Name	KDa
Aliases	RARA RARA; Retinoic Acid Receptor Alpha; RAR-Alpha; NR1B1; RARalpha; RAR; Nuclear Receptor Subfamily 1 Group B Member 1; Nucleophosmin-Retinoic Acid Receptor Alpha Fusion Protein NPM-RAR Long Form; Retinoic Acid Receptor, Alpha Polypeptide; Retinoic Acid Receptor, Alpha; PML-DDX5-RARA Fusion Protein; PML-DDX5-RARA Fusion
Immunogen	A synthesized peptide derived from human Retinoic Acid Receptor alpha

**KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody - Additional Information**

Gene ID	5914
Other Names	
Retinoic acid receptor alpha, RAR-alpha, Nuclear receptor subfamily 1 group B member 1, RARA, NR1B1	

**KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody - Protein Information****Name** RARA**Synonyms** NR1B1**Function**

Receptor for retinoic acid (PubMed:<a href="http://www.uniprot.org/citations/16417524" target="\_blank">16417524</a>, PubMed:<a href="http://www.uniprot.org/citations/19850744" target="\_blank">19850744</a>, PubMed:<a href="http://www.uniprot.org/citations/20215566" target="\_blank">20215566</a>, PubMed:<a href="http://www.uniprot.org/citations/21152046" target="\_blank">21152046</a>, PubMed:<a href="http://www.uniprot.org/citations/37478846" target="\_blank">37478846</a>)

target="\_blank">37478846</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/21152046" target="\_blank">21152046</a>, PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>, PubMed:<a href="http://www.uniprot.org/citations/37478846" target="\_blank">37478846</a>). The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5 (PubMed:<a href="http://www.uniprot.org/citations/19398580" target="\_blank">19398580</a>, PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). In the absence of ligand, the RXR- RAR heterodimers associate with a multiprotein complex containing transcription corepressors that induce histone deacetylation, chromatin condensation and transcriptional suppression (PubMed:<a href="http://www.uniprot.org/citations/16417524" target="\_blank">16417524</a>). On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation (PubMed:<a href="http://www.uniprot.org/citations/19850744" target="\_blank">19850744</a>, PubMed:<a href="http://www.uniprot.org/citations/20215566" target="\_blank">20215566</a>, PubMed:<a href="http://www.uniprot.org/citations/37478846" target="\_blank">37478846</a>, PubMed:<a href="http://www.uniprot.org/citations/9267036" target="\_blank">9267036</a>). Formation of a complex with histone deacetylases might lead to inhibition of RARE DNA element binding and to transcriptional repression (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). Transcriptional activation and RARE DNA element binding might be supported by the transcription factor KLF2 (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). RARA plays an essential role in the regulation of retinoic acid-induced germ cell development during spermatogenesis (By similarity). Has a role in the survival of early spermatocytes at the beginning prophase of meiosis (By similarity). In Sertoli cells, may promote the survival and development of early meiotic prophase spermatocytes (By similarity). In concert with RARG, required for skeletal growth, matrix homeostasis and growth plate function (By similarity). Together with RXRA, positively regulates microRNA-10a expression, thereby inhibiting the GATA6/VCAM1 signaling response to pulsatile shear stress in vascular endothelial cells (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>). In association with HDAC3, HDAC5 and HDAC7 corepressors, plays a role in the repression of microRNA-10a and thereby promotes the inflammatory response (PubMed:<a href="http://www.uniprot.org/citations/28167758" target="\_blank">28167758</a>).

### Cellular Location

Nucleus. Cytoplasm. Note=Nuclear localization depends on ligand binding, phosphorylation and sumoylation (PubMed:19850744) Translocation to the nucleus in the absence of ligand is dependent on activation of PKC and the downstream MAPK phosphorylation (By similarity). Increased nuclear localization upon pulsatile shear stress (PubMed:28167758).

{ECO:0000250|UniProtKB:P11416, ECO:0000269|PubMed:19850744, ECO:0000269|PubMed:28167758}

### Tissue Location

Expressed in monocytes.

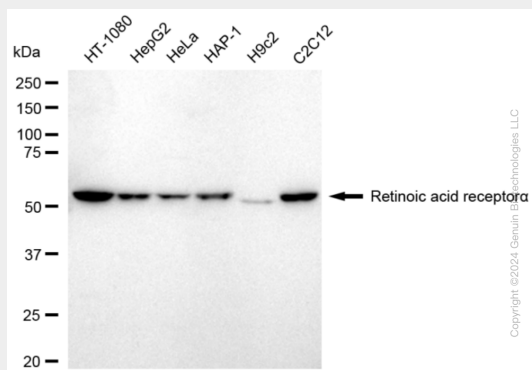
## KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

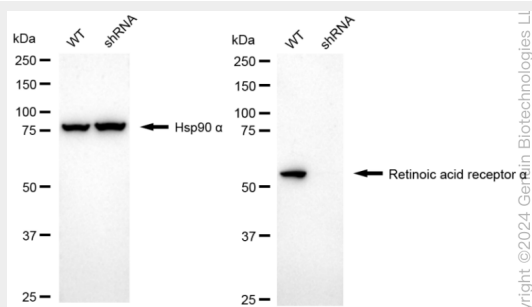
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

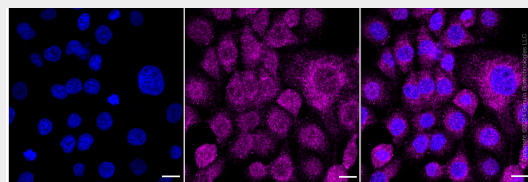
## KD-Validated Anti-Retinoic Acid Receptor Alpha Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-Retinoic acid receptor alpha antibody (Cat#AGI1657). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Retinoic acid receptor alpha antibody (Cat#AGI1657, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Retinoic Acid Receptor alpha antibody (Cat#AGI1657). Retinoic Acid Receptor alpha expression in wild type (WT) and Retinoic Acid Receptor alpha shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Retinoic Acid Receptor alpha antibody (Cat#AGI1657, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of HT-1080 cells with anti-Retinoic acid receptor alpha antibody (Cat#AGI1657, 1:1,000). Nuclei were stained blue with DAPI; Retinoic acid receptor alpha was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.