ARG41067
anti-Retinoic Acid Receptor alpha antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Retinoic Acid Receptor alpha
Tested Reactivity	Hu, Ms
Tested Application	FACS, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Retinoic Acid Receptor alpha
Species	Human
Immunogen	Synthetic peptide derived from Human Retinoic Acid Receptor alpha.
Conjugation	Un-conjugated
Alternate Names	Nuclear receptor subfamily 1 group B member 1; RAR; RAR-alpha; Retinoic acid receptor alpha; NR1B1

Application Instructions

Application table

Application	Dilution
FACS	1:50
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	RARA
Gene Full Name	retinoic acid receptor, alpha
Background	This gene represents a nuclear retinoic acid receptor. The encoded protein, retinoic acid receptor alpha, regulates transcription in a ligand-dependent manner. This gene has been implicated in regulation of development, differentiation, apoptosis, granulopoeisis, and transcription of clock genes. Translocations between this locus and several other loci have been associated with acute promyelocytic leukemia. Alternatively spliced transcript variants have been found for this locus.[provided by RefSeq, Sep 2010]
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). Regulates expression of target genes in a ligand-dependent manner by recruiting chromatin complexes containing KMT2E/MLL5. Mediates retinoic acid-induced granulopoiesis. [UniProt]
Calculated Mw	51 kDa
PTM	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 confromational 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. [UniProt]
Cellular Localization	Nucleus. Cytoplasm. Note=Nuclear localization depends on ligand binding, phosphorylation and sumoylation. Transloaction to the nucleus in the absence of ligand is dependent on activation of PKC and the downstream MAPK phosphorylation. [UniProt]

Images

ARG41067 anti-Retinoic Acid Receptor alpha antibody WB image

Western blot: MCF7 cell lysate stained with ARG41067 anti-Retinoic Acid Receptor alpha antibody.