

RAR α (L-15): sc-15040

BACKGROUND

Retinoids (RA) are metabolites of vitamin A (retinol) that are important signaling molecules during vertebrate development and tissue differentiation. RAs activate the retinoic acid receptor (RAR) and retinoid X receptor (RXR) nuclear transcription factor families. Most retinoid forms activate RAR family members, whereas RXR family members are activated by 9-*cis*-RA only. RAR family members, which include RAR α , RAR β and RAR γ , have a high affinity for all transretinoic acids and belong to the same class of nuclear transcription factors as thyroid hormone receptors, vitamin D₃ receptor and ecdysone receptor. RAR isoforms are expressed in distinct patterns throughout development and in the mature organism. The human RAR α gene maps to chromosome 17 and is implicated in the chromosomal translocation associated with acute promyelocytic leukemia (APL-M3). Specifically, the RAR α gene is fused with the promyelocytic leukemia (PML) gene, which encodes the fusion protein PML/RAR α . The PML/RAR α fusion protein inhibits PML-dependent apoptotic pathways and halts myeloid differentiation at the promyelocytic stage.

REFERENCES

1. Koelle, M.R., et al. 1991. The *Drosophila* EcR gene encodes an ecdysone receptor, a new member of the steroid receptor superfamily. *Cell* 67: 59-77.
2. Bhat, M.K., et al. 1994. Phosphorylation enhances the target gene sequence-dependent dimerization of thyroid hormone receptor with retinoid X receptor. *Proc. Natl. Acad. Sci. USA* 91: 7927-7931.

CHROMOSOMAL LOCATION

Genetic locus: RARA (human) mapping to 17q21.2; Rara (mouse) mapping to 11 D.

SOURCE

RAR α (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RAR α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15040 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-15040 X, 200 μ g/0.1 ml.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

RAR α (L-15) is recommended for detection of RAR α_1 and RAR α_2 of mouse, rat, human and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RAR α (L-15) is also recommended for detection of RAR α_1 and RAR α_2 in additional species, including equine, canine, bovine and avian.

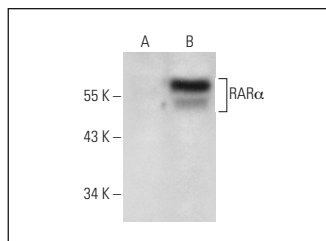
Suitable for use as control antibody for RAR α siRNA (h): sc-29465, RAR α siRNA (m): sc-36393, RAR α shRNA Plasmid (h): sc-29465-SH, RAR α shRNA Plasmid (m): sc-36393-SH, RAR α shRNA (h) Lentiviral Particles: sc-29465-V and RAR α shRNA (m) Lentiviral Particles: sc-36393-V.

RAR α (L-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RAR α : 52 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, NIH/3T3 whole cell lysate: sc-2210 or RAR α (h2): 293T Lysate: sc-159767.

DATA



RAR α (L-15): sc-15040. Western blot analysis of RAR α expression in non-transfected: sc-117752 (A) and human RAR α transfected: sc-159767 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kumar, P., et al. 2014. All-*trans* retinoic acid and sodium butyrate enhance natriuretic peptide receptor a gene transcription: role of histone modification. *Mol. Pharmacol.* 85: 946-957.
2. Liu, H.Y., et al. 2014. Regulation of cyp26a1 on Th17 cells in mouse perimplantation. *J. Cell. Mol. Med.* 18: 455-467.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **RAR α (1C10): sc-293417**, our highly recommended monoclonal alternative to RAR α (L-15).