

RXR β (13-17): sc-741

BACKGROUND

Two families of retinoid receptors, RARs and RXRs, have been identified. Retinoic acid receptors (RARs) include RAR α , RAR β and RAR γ , each of which have a high affinity for all *trans*-retinoic acids and belong to the same class of nuclear transcription factors as thyroid hormone receptors, vitamin D₃ receptor and ecdysone receptor. The ligand-binding domains of the RARs are highly conserved and RAR isoforms are expressed in distinct patterns throughout development and in the mature organism. Members of the retinoid X receptor (RXR) family, RXR α , RXR β and RXR γ , are activated by 9-*cis*-RA, a stereo- and photo-isomer of all *trans*-RA that is expressed *in vivo* in both liver and kidney and may represent a widely used hormone. As is true for the RAR subfamily, the RXR receptors are closely related to each other both in their DNA-binding and ligand-binding domains and are encoded by separate genes at distinct chromosomal loci.

REFERENCES

1. Ishikawa, T., et al. 1990. A functional retinoic acid receptor encoded by the gene on human chromosome 12. *Mol. Endocrinol.* 4: 837-844.
2. Yang, N., et al. 1991. Characterization of DNA-binding and retinoic acid-binding properties of retinoic acid receptor. *Proc. Natl. Acad. Sci. USA* 88: 3559-3563.
3. 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.
4. Heyman, R.A., et al. 1992. 9-*cis*-retinoic acid is a high-affinity ligand for the retinoid X receptor. *Cell* 68: 397-406.
5. Levin, A.A., et al. 1992. 9-*cis*-retinoic acid stereoisomer binds and activates the nuclear receptor RXR α . *Nature* 355: 359-361.
6. Mangelsdorf, D.J., et al. 1994. The retinoid receptors. In Sporn, M.B., et al, eds., *THE RETINOIDS: Biology, Chemistry, and Medicine*, 2nd Edition. New York: Raven Press Ltd., 319-349.

CHROMOSOMAL LOCATION

Genetic locus: RXRB (human) mapping to 6p21.32; Rxb (mouse) mapping to 17 B1.

SOURCE

RXR β (13-17) is a mouse monoclonal antibody raised against full length recombinant RXR β of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

RXR β (13-17) is recommended for detection of RXR β ₁ and RXR β ₂ of mouse, rat and human 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); non cross-reactive with either RXR α or RXR γ .

Suitable for use as control antibody for RXR β siRNA (h): sc-36445, RXR β siRNA (m): sc-36446, RXR β shRNA Plasmid (h): sc-36445-SH, RXR β shRNA Plasmid (m): sc-36446-SH, RXR β shRNA (h) Lentiviral Particles: sc-36445-V and RXR β shRNA (m) Lentiviral Particles: sc-36446-V.

Molecular Weight of RXR β : 50-54 kDa.

Positive Controls: A-431 nuclear extract: sc-2122 or SK-BR-3 nuclear extract: sc-2134.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Op De Beeck, A., et al. 2001. NS1- and minute virus of mice-induced cell cycle arrest: involvement of p53 and p21^{cip1}. *J. Virol.* 75: 11071-11078.
2. Porlan, E., et al. 2013. Transcriptional repression of Bmp2 by p21^{Waf1/Cip1} links quiescence to neural stem cell maintenance. *Nat. Neurosci.* 16: 1567-1575.

PROTOCOLS

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



See **RXR α / β / γ (F-1): sc-46659** for RXR α / β / γ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.