SANTA CRUZ BIOTECHNOLOGY, INC.

RXRβ (3C8): sc-293432

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Two families of retinoid receptors, RARs and RXRs, have been identified. Retinoic acid receptors (RARs) include RARα, RXRβ and RARγ, 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 D_3 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, RXRα, RXRβ and RXRγ, 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. Levin, A.A., et al. 1992. 9-*cis*-Retinoic acid stereoisomer binds and activates the nuclear receptor RXRα. Nature 355: 359-361.
5. Heyman, R.A., et al. 1992. 9-*cis*-Retinoic acid is a high-affinity ligand for the retinoid X receptor. Cell 68: 397-406.
6. Mangelsdorf, D.J., et al. 1994. The retinoid receptors. In Sporn, M.B., et al, eds. The Retinoids: Biology, Chemistry, and Medicine. New York: Raven Press, Ltd., 319-349.
7. 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: RXRB (human) mapping to 6p21.32; Rxrb (mouse) mapping to 17 B1.

SOURCE

RXRβ (3C8) is a mouse monoclonal antibody raised against amino acids 161-260 representing partial length RXRβ of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} 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.

APPLICATIONS

RXRβ (3C8) is recommended for detection of RXRβ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

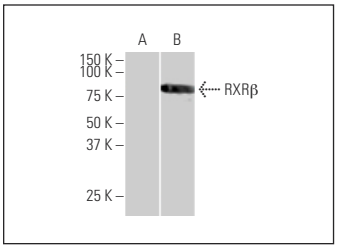
Molecular Weight of RXRβ: 50-54 kDa.

Positive Controls: RXRβ transfected 293T whole cell lysate.

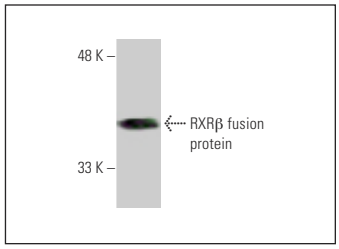
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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).

DATA



RXRβ (3C8): sc-293432. Western blot analysis of RXRβ expression in non-transfected (**A**) and RXRβ transfected (**B**) 293T whole cell lysates.



RXRβ (3C8): sc-293432. Western blot analysis of human recombinant RXRβ fusion protein.

SELECT PRODUCT CITATIONS

1. Juin, S.K., et al. 2021. GYY4137 regulates extracellular matrix turnover in the diabetic kidney by modulating retinoid X receptor signaling. Biomolecules 11: 1477.

RESEARCH USE

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

PROTOCOLS

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