SANTA CRUZ BIOTECHNOLOGY, INC.

RXRα (h): 293T Lysate: sc-111936

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, RARβ 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. 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.

7. 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.

CHROMOSOMAL LOCATION

Genetic locus: RXRA (human) mapping to 9q34.2.

PRODUCT

RXRα (h): 293T Lysate represents a lysate of human RXRα transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

RXRα (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RXRα antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RXRα/β/γ (F-1): sc-46659 is recommended as a positive control antibody for Western Blot analysis of enhanced human RXRα expression in RXRα transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA
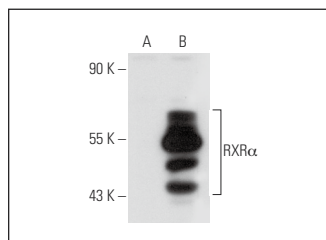
RXRα/β/γ (F-1): sc-46659. Western blot analysis of RXRα expression in non-transfected: sc-117752 (**A**) and human RXRα transfected: sc-111936 (**B**) 293T whole cell lysates.

RESEARCH USE

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