SANTA CRUZ BIOTECHNOLOGY, INC.

RXRβ_2 (S-20): sc-554

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The Power to Question

BACKGROUND

Retinoids are metabolites of vitamin A (retinol) and are believed to represent important signaling molecules during vertebrate development and tissue differentiation. Two families of retinoid receptors 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 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, RXRα, RXRβ and RXRγ, are activated by 9-*cis*-RA, a stero- and photoisomer 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 Retinoids: Biology, Chemistry, and Medicine, 2nd Edition. In Sporn, M.B., eds. New York: Raven Press, Ltd., 314-349.

CHROMOSOMAL LOCATION

Genetic locus: RXRB (human) mapping to 6p21.3; Rxrb (mouse) mapping to 17 B1.

SOURCE

RXRβ_2 (S-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of RXRβ_2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-554 P, (100 µg 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-554 X, 200 µg/0.1 ml.

APPLICATIONS

RXRβ_2 (S-20) is recommended for detection of RXRβ_2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RXRβ_2 (S-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RXRβ_2: 50-54 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Komorek, J., et al. 2010. Adenovirus type 5 E1A and E6 proteins of low-risk cutaneous β-human papillomaviruses suppress cell transformation through interaction with FOXK1/K2 transcription factors. J. Virol. 84: 2719-2731.

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.

PROTOCOLS

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