SANTA CRUZ BIOTECHNOLOGY, INC.

RARγ (H-6): sc-398065

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Retinoids are metabolites of vitamin A (retinol) that are important signaling molecules during vertebrate development and tissue differentiation. Retinoic acid receptors (RARs) and retinoid X receptors (RXRs) are nuclear transcription factors that modulate the effects of retinoids (RA) on gene expression. Most retinoid forms (including all *trans* RA, 9-*cis* RA, 4oxo RA and 3,4 dihydro RA) activate RAR family members, whereas RXR family members are activated by 9-*cis*-RA only. RA binds RARs, inducing a change in receptor configuration that allows DNA binding and increased gene transcription from specific genes to occur. RAR family members, which include RARα, RARβ and RARγ, belong to the same class of nuclear transcription factors as thyroid hormone receptors, vitamin D_3 receptor and ecdysone receptor. Retinoid receptor expression is tissue specific; the skin expresses RARγ and RXRα. The expression of RARγ and RXRβ was somewhat decreased in lung cancers. The human RARγ gene maps to chromosome 12q13.13.

REFERENCES

1. Mattei, M.G., et al. 1991. Chromosomal assignment of retinoic acid receptor (RAR) genes in the human, mouse, and rat genomes. Genomics 10: 1061-1069.
2. 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.
3. Rees, J. 1992. The molecular biology of retinoic acid receptors: orphan from good family seeks home. Br. J. Dermatol. 126: 97-104.
4. 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: RARG (human) mapping to 12q13.13.

SOURCE

RARγ (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 417-454 at the C-terminus of RARγ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398065 X, 200 µg/0.1 ml.

RARγ (H-6) is available conjugated to agarose (sc-398065 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398065 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398065 PE), fluorescein (sc-398065 FITC), Alexa Fluor® 488 (sc-398065 AF488), Alexa Fluor® 546 (sc-398065 AF546), Alexa Fluor® 594 (sc-398065 AF594) or Alexa Fluor® 647 (sc-398065 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398065 AF680) or Alexa Fluor® 790 (sc-398065 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398065 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RARγ (H-6) is recommended for detection of RARγ1 and RARγ2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

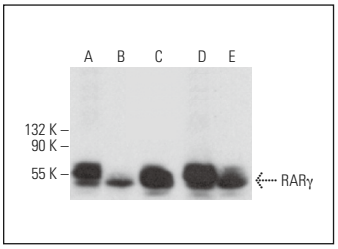
Suitable for use as control antibody for RARγ siRNA (h): sc-36392, RARγ shRNA Plasmid (h): sc-36392-SH and RARγ shRNA (h) Lentiviral Particles: sc-36392-V.

RARγ (H-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

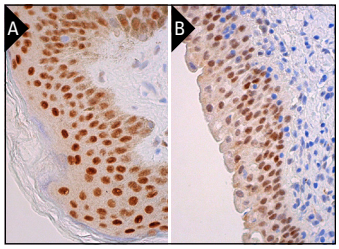
Molecular Weight of RARγ: 50 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HT-29 whole cell lysate: sc-364232 or AN3 CA cell lysate: sc-24662.

DATA



RARγ (H-6): sc-398065. Western blot analysis of RARγ expression in MCF7 (**A**), HT-29 (**B**), AN3 CA (**C**), T-47D (**D**) and U-87 MG (**E**) whole cell lysates.



RARγ (H-6): sc-398065. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nuclear staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (**A**) and paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Bauzone, M., et al. 2021. Cross-talk between YAP and RAR-RXR drives expression of stemness genes to promote 5-FU resistance and self-renewal in colorectal cancer cells. Mol. Cancer Res. 19: 612-622.

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 for detailed protocols and support products.