SANTA CRUZ BIOTECHNOLOGY, INC.

RAI3 (A-11): sc-390263

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Retinoic acid-induced protein 3 (RAI3) is an transmembrane G protein-coupled receptor that affects many essential biological processes including embryogenesis, cell growth, differentiation, and apoptosis. RAI3 may also be involved in maintaining homeostasis of epithelial cells. Retinoic acid receptors directly regulate RAI3 during its transcription in embryonal carcinoma differentiation. RAI3 expression is upregulated in most tumor cell lines that express mutant p53, suggesting that p53 interacts with the promoter of RAI3 and represses its expression at the beginning of apoptosis. RAI3 is a potential molecular target for diagnosing breast cancer, and selective suppression of signals from RAI3 may have a place in breast cancer treatments.

REFERENCES

1. Cheng, Y., et al. 1999. Molecular cloning and characterization of a novel retinoic acid-inducible gene that encodes a putative G protein-coupled receptor. J. Biol. Chem. 273: 35008-35015.
2. Bräuner-Osborne, H., et al. 2000. Sequence and expression pattern of a novel human orphan G protein-coupled receptor, GPRC5B, a family C receptor with a short amino-terminal domain. Genomics 65: 121-128.
3. Robbins, M.J., et al. 2000. Molecular cloning and characterization of two novel retinoic acid-inducible orphan G protein-coupled receptors (GPRC5B and GPRC5C). Genomics 67: 8-18.
4. Hofmann, W.K., et al. 2002. Characterization of gene expression of $CD34^+$ cells from normal and myelodysplastic bone marrow. Blood 100: 3553-3560.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604138. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: GPRC5A (human) mapping to 12p13.1; Gprc5a (mouse) mapping to 6 G1.

SOURCE

RAI3 (A-11) is a mouse monoclonal antibody raised against amino acids 237-356 mapping at the C-terminus of RAI3 of mouse 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.

RAI3 (A-11) is available conjugated to agarose (sc-390263 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390263 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390263 PE), fluorescein (sc-390263 FITC), Alexa Fluor® 488 (sc-390263 AF488), Alexa Fluor® 546 (sc-390263 AF546), Alexa Fluor® 594 (sc-390263 AF594) or Alexa Fluor® 647 (sc-390263 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390263 AF680) or Alexa Fluor® 790 (sc-390263 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

RAI3 (A-11) is recommended for detection of RAI3 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RAI3 siRNA (h): sc-61440, RAI3 siRNA (m): sc-61441, RAI3 shRNA Plasmid (h): sc-61440-SH, RAI3 shRNA Plasmid (m): sc-61441-SH, RAI3 shRNA (h) Lentiviral Particles: sc-61440-V and RAI3 shRNA (m) Lentiviral Particles: sc-61441-V.

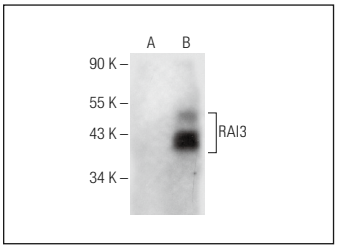
Molecular Weight of RAI3: 32 kDa.

Positive Controls: RAI3 (h): 293T Lysate: sc-158912.

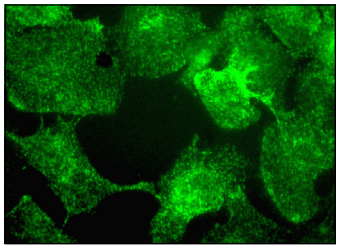
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



RAI3 (A-11): sc-390263. Western blot analysis of RAI3 expression in non-transfected: sc-117752 (**A**) and human RAI3 transfected: sc-158912 (**B**) 293T whole cell lysates.



RAI3 (A-11): sc-390263. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization.

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.