SANTA CRUZ BIOTECHNOLOGY, INC.

RCAS1 (D-9): sc-398052

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

RCAS1/EBAG9 (receptor-binding cancer antigen expressed on SiSo cells/ estrogen receptor-binding fragment-associated gene 9) is an estrogen-transcribed protein. Soluble and membranous RCAS1 proteins may play a role in the immune escape of tumor cells by promoting T lymphocyte inhibition of growth and apoptosis. RCAS1 is expressed in a wide variety of cancers, including uterine, ovarian, and lung cancer cells, and acts as a ligand for a putative receptor present on peripheral lymphocytes. RCAS1 is highly expressed not only in cancer cells but also in non-tumor bile duct cells subject to immune attack. RCAS1 inhibits the *in vitro* growth of receptor-expressing cells and induces apoptosis, contributing to the ability of tumor cells to evade host immune surveillance. High expression of RCAS1 significantly correlates with tumor progression and with poor outcome for many cancer patients. The human RCAS1/EBAG9 gene maps to human chromosome 8q23.2.

REFERENCES

1. Tsuneizumi, M., et al. 2002. A highly polymorphic CA repeat marker at the EBAG9/RCAS1 locus on 8q23 that detected frequent multiplication in breast cancer. Ann. Hum. Biol. 29: 457-460.
2. Rousseau, J., et al. 2002. RCAS1 is associated with ductal breast cancer progression. Biochem. Biophys. Res. Commun. 293: 1544-1549.
3. Oizumi, S., et al. 2002. RCAS1 expression: a potential prognostic marker for adenocarcinomas of the lung. Oncology 62: 333-339.
4. Enjoji, M., et al. 2002. The tumor-associated antigen, RCAS1, can be expressed in immune-mediated diseases as well as in carcinomas of biliary tract. J. Hepatol. 36: 786-792.

CHROMOSOMAL LOCATION

Genetic locus: EBAG9 (human) mapping to 8q23.2; Ebag9 (mouse) mapping to 15 B3.2.

SOURCE

RCAS1 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 124-159 within an internal region of RCAS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RCAS1 (D-9) is available conjugated to agarose (sc-398052 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398052 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398052 PE), fluorescein (sc-398052 FITC), Alexa Fluor® 488 (sc-398052 AF488), Alexa Fluor® 546 (sc-398052 AF546), Alexa Fluor® 594 (sc-398052 AF594) or Alexa Fluor® 647 (sc-398052 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398052 AF680) or Alexa Fluor® 790 (sc-398052 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398052 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

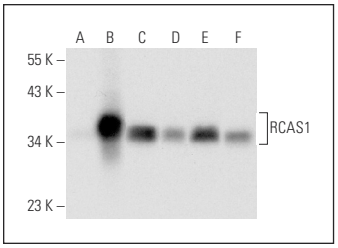
RCAS1 (D-9) is recommended for detection of RCAS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RCAS1 siRNA (h): sc-37493, RCAS1 siRNA (m): sc-37494, RCAS1 shRNA Plasmid (h): sc-37493-SH, RCAS1 shRNA Plasmid (m): sc-37494-SH, RCAS1 shRNA (h) Lentiviral Particles: sc-37493-V and RCAS1 shRNA (m) Lentiviral Particles: sc-37494-V.

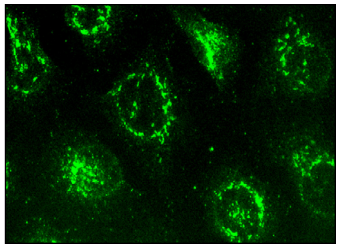
Molecular Weight of RCAS1: 32 kDa.

Positive Controls: RCAS1 (h): 293 Lysate: sc-112757, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

DATA



RCAS1 (D-9): sc-398052. Western blot analysis of RCAS1 expression in non-transfected 293: sc-110760 (**A**), human RCAS1 transfected 293: sc-112757 (**B**), MCF7 (**C**), A-431 (**D**) and HeLa (**E**) whole cell lysates and human lung tissue extract (**F**).



RCAS1 (D-9): sc-398052. Immunofluorescence staining of methanol-fixed HeLa cells showing Golgi apparatus localization.

SELECT PRODUCT CITATIONS

1. Henkels, K.M., et al. 2016. A phosphatidic acid (PA) conveyor system of continuous intracellular transport from cell membrane to nucleus maintains EGF receptor homeostasis. Oncotarget 7: 47002-47017.
2. Horn, A.V., et al. 2017. A conserved role for the ESCRT membrane budding complex in LINE retrotransposition. PLoS Genet. 13: e1006837.
3. Peña, E., et al. 2019. Increased expression of mitochondrial sodium-coupled ascorbic acid transporter-2 (mSVCT2) as a central feature in breast cancer. Free Radic. Biol. Med. 135: 283-292.
4. Leiva-Carrasco, M.J., et al. 2021. *In vivo* modification of the goat mammary gland glycosylation pathway. N. Biotechnol. 61: 11-21.

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.