SANTA CRUZ BIOTECHNOLOGY, INC.

Rap 2A/B/C (FL-183): sc-292458

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ras oncogenes encode GTP-binding proteins that are capable of transforming immortalized cells in culture. Two Ras-related human genes, designated RAP1A and RAP1B, encode 95% homologous proteins (namely Rap 1A and Rap 1B) that share a similar C-terminal Cys-Ali-Ali-Xaa sequence with Ras proteins and are ubiquitously expressed in mammalian tissues. The putative "effector" domain of Ras proteins, whose integrity is required for cell transformation as well as interaction with the putative effector protein GAP, is conserved in both Rap 1 proteins. Rap 1A is thought to interfere with Ras effector function by binding to Ras GAP in a GTP-dependent manner without affecting Rap 1A GTPase activity. Rap 2, another Ras-related protein, shares 60% identity with Rap 1A and exhibits a carboxy-terminal CAAX motif and two upstream cysteines similar to those of the H-Ras, K-Ras and N-Ras proteins. In contrast with Rap 1A and Rap 1B, overexpression of Rap 2 does not interfere with the Ras signaling pathway.

REFERENCES

1. Pizon, V., et al. 1988. Human cDNAs Rap 1 and Rap 2 homologous to the *Drosophila* gene Dras3 encode proteins closely related to Ras in the "effector" region. Oncogene 3: 201-204.
2. Pizon, V., et al. 1988. Nucleotide sequence of a human cDNA encoding a Ras-related protein (Rap 1B). Nucleic Acids Res. 16: 7719.
2. Culine, S., et al. 1989. Expression of the Ras-related Rap genes in human tumors. Int. J. Cancer 44: 990-994.
3. Kitayama, H., et al. 1989. A Ras-related gene with transformation suppressor activity. Cell 56: 77-84.
4. Kim, S., et al. 1990. Tissue and subcellular distributions of the smg-21/Rap 1/Krev-1 proteins which are partly distinct from those of c-Ras p21s. Mol. Cell. Biol. 10: 2645-2652.
5. Frech, M., et al. 1990. Inhibition of GTPase activating protein stimulation of Ras-p21 GTPase by the Krev-1 gene product. Science 249: 169-171.
7. Beranger, F., et al. 1991. Posttranslational processing and subcellular localization of the Ras-related Rap 2 protein. Oncogene 6: 1835-1842.

SOURCE

Rap 2A/B/C (FL-183) is a rabbit polyclonal antibody raised against amino acids 1-183 representing full length Rap 2A 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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Rap 2A/B/C (FL-183) is recommended for detection of Rap 2A, Rap 2B and Rap 2C of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Rap 2A/B/C (FL-183) is also recommended for detection of Rap 2A, Rap 2B and Rap 2C in additional species, including equine, canine, bovine, porcine and avian.

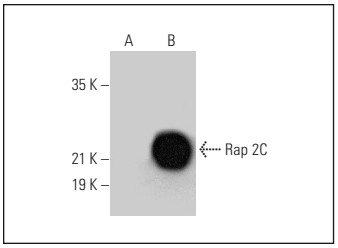
Molecular Weight of Rap 2A/B/C: 21 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SW480 cell lysate: sc-2219 or Rap 2C (m2): 293T Lysate: sc-122971.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Rap 2A/B/C (FL-183): sc-292458. Western blot analysis of Rap 2C expression in non-transfected: sc-117752 (**A**) and mouse Rap 2C transfected: sc-122971 (**B**) 293T whole cell lysates.

RESEARCH USE

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