

Rap 1B (C-17): sc-1481

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.

CHROMOSOMAL LOCATION

Genetic locus: RAP1B (human) mapping to 12q15; Rap1b (mouse) mapping to 10 D2.

SOURCE

Rap 1B (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rap 1B 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-1481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Rap 1B (C-17) is recommended for detection of Rap 1B 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Rap 1B (C-17) is also recommended for detection of Rap 1B in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rap 1B siRNA (h): sc-41854, Rap 1B siRNA (m): sc-41855, Rap 1B shRNA Plasmid (h): sc-41854-SH, Rap 1B shRNA Plasmid (m): sc-41855-SH, Rap 1B shRNA (h) Lentiviral Particles: sc-41854-V and Rap 1B shRNA (m) Lentiviral Particles: sc-41855-V.

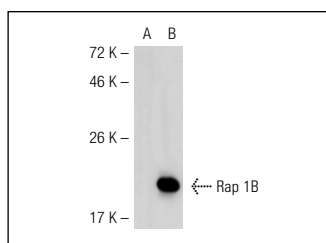
Molecular Weight of Rap 1B: 21 kDa.

Positive Controls: Rap 1B (m): 293T Lysate: sc-122965.

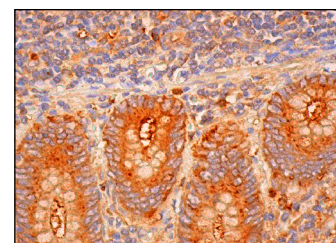
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Rap 1B (C-17): sc-1481. Western blot analysis of Rap 1B expression in non-transfected: sc-117752 (A) and mouse Rap 1B transfected: sc-122965 (B) 293T whole cell lysates.



Rap 1B (C-17): sc-1481. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells.

SELECT PRODUCT CITATIONS

- Gutmann, D.H., et al. 1997. Alterations in the Rap 1 signaling pathway are common in human gliomas. *Oncogene* 15: 1611-1616.
- Miggin, S.M. and Kinsella. B.T. 2002. Regulation of extracellular signal-regulated kinase cascades by α - and β -isoforms of the human thromboxane A₂ receptor. *Mol. Pharmacol.* 61: 817-831.
- Chrzanowska-Wodnicka, M., et al. 2005. Rap 1B is required for normal platelet function and hemostasis in mice. *J. Clin. Invest.* 115: 680-687.
- Zhang, M., et al. 2012. miR-518b is down-regulated, and involved in cell proliferation and invasion by targeting Rap 1B in esophageal squamous cell carcinoma. *FEBS Lett.* 586: 3508-3521.

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.



Try **Rap 1 (E-6): sc-398755**, our highly recommended monoclonal alternative to Rap 1B (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Rap 1 (E-6): sc-398755**.