

RAP1 (H-300): sc-28197

BACKGROUND

RAP1, also known as TERF2IP (telomeric repeat-binding factor 2-interacting protein 1) or DRIP5, is a 399 amino acid nuclear and cytoplasmic protein that contains one BRCT domain and one Myb-like domain. Belonging to the RAP1 family, RAP1 acts as both a regulator of telomere function and a regulator of transcription. While it does not bind DNA directly, RAP1 is recruited to telomeric double-stranded 5'-TTAGGG-3' repeats via its interaction with TRF2. RAP1 is required to negatively regulate telomere recombination and is essential for repressing homology-directed repair (HDR), which can affect telomere length. The gene that encodes RAP1 maps to human chromosome 16q23.1 and mouse chromosome 8 E1.

CHROMOSOMAL LOCATION

Genetic locus: TERF2IP (human) mapping to 16q23.1; Terf2ip (mouse) mapping to 8 E1.

SOURCE

RAP1 (H-300) is a rabbit polyclonal antibody raised against amino acids 153-300 mapping within an internal region of RAP1 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.

APPLICATIONS

RAP1 (H-300) is recommended for detection of RAP1 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), 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 RAP1 siRNA (h): sc-38554, RAP1 siRNA (m): sc-38555, RAP1 shRNA Plasmid (h): sc-38554-SH, RAP1 shRNA Plasmid (m): sc-38555-SH, RAP1 shRNA (h) Lentiviral Particles: sc-38554-V and RAP1 shRNA (m) Lentiviral Particles: sc-38555-V.

Molecular Weight of RAP1: 44 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, RAP1 (m): 293T Lysate: sc-122972 or IMR-32 nuclear extract: sc-2148.

STORAGE

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

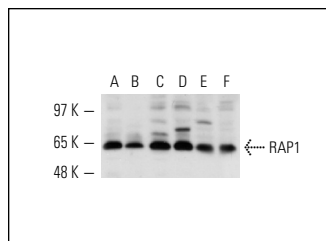
PROTOCOLS

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

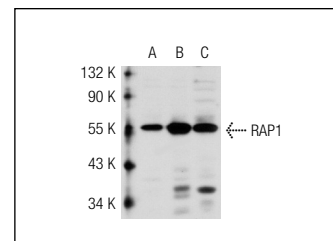
RESEARCH USE

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

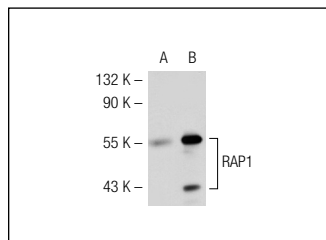
DATA



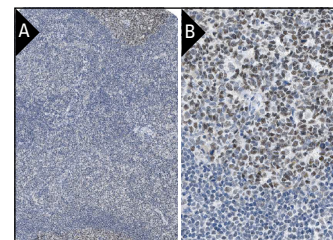
RAP1 (H-300): sc-28197. Western blot analysis of RAP1 expression in HeLa (A), HL-60 (B), IMR-32 (C), C32 (D) and A-431 (E) nuclear extracts and HT-1080 whole cell lysate (F).



RAP1 (H-300): sc-28197. Western blot analysis of RAP1 expression in non-transfected: sc-117752 (A) and human RAP1 transfected: sc-117426 (B) 293T whole cell lysates and HeLa nuclear extract (C).



RAP1 (H-300): sc-28197. Western blot analysis of RAP1 expression in non-transfected: sc-117752 (A) and mouse RAP1 transfected: sc-122972 (B) 293T whole cell lysates.



RAP1 (H-300): sc-28197. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of lymphoid cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Chen, Y., et al. 2005. Regulation of cortical dendrite development by Rap1 signaling. *Mol. Cell. Neurosci.* 28: 215-228.
- Miyata, M., et al. 2009. Regulation by afadin of cyclical activation and inactivation of Rap1, Rac1, and RhoA small G proteins at leading edges of moving NIH3T3 cells. *J. Biol. Chem.* 284: 24595-24609.
- Huang, P.R., et al. 2010. Telomeric DNA-binding activities of heterogeneous nuclear ribonucleoprotein A3 *in vitro* and *in vivo*. *Biochim. Biophys. Acta* 1803: 1164-1174.
- Teo, H., et al. 2010. Telomere-independent Rap1 is an IKK adaptor and regulates NF-κB-dependent gene expression. *Nat. Cell Biol.* 12: 758-767.
- Bakshi, K., et al. 2011. Prenatal cocaine exposure increases synaptic localization of a neuronal RasGEF, GRASP-1 via hyperphosphorylation of AMPAR anchoring protein, GRIP. *PLoS ONE* 6: e25019.

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Try **RAP1 (4C8/1): sc-53434** or **RAP1 (5G7): sc-47695**, our highly recommended monoclonal alternatives to RAP1 (H-300).