

Rap1 (yN-18): sc-6662

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.

REFERENCES

- Li, B., et al. 2000. Identification of human Rap1: implications for telomere evolution. *Cell* 101: 471-483.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605061. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Hanaoka, S., et al. 2001. NMR structure of the hRap1 Myb motif reveals a canonical three-helix bundle lacking the positive surface charge typical of Myb DNA-binding domains. *J. Mol. Biol.* 312: 167-175.
- Tan, M., et al. 2003. The telomeric protein Rap1 is conserved in vertebrates and is expressed from a bidirectional promoter positioned between the Rap1 and KARS genes. *Gene* 323: 1-10.
- Ye, J.Z., et al. 2004. TIN2 binds TRF1 and TRF2 simultaneously and stabilizes the TRF2 complex on telomeres. *J. Biol. Chem.* 279: 47264-47271.
- Liu, D., et al. 2004. Telosome, a mammalian telomere-associated complex formed by multiple telomeric proteins. *J. Biol. Chem.* 279: 51338-51342.
- Sarthy, J., et al. 2009. Human RAP1 inhibits non-homologous end joining at telomeres. *EMBO J.* 28: 3390-3399.

SOURCE

Rap1 (yN-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rap1 of *Saccharomyces cerevisiae* 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-6662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rap1 (yN-18) is recommended for detection of Rap1 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

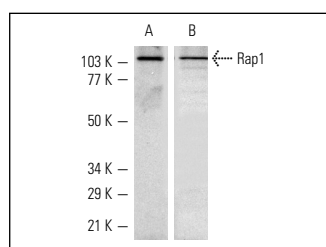
Molecular Weight (predicted) of Rap1: 92 kDa.

Molecular Weight (observed) of Rap1: 118 kDa.

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.

DATA



Western blot analysis of Rap1 expression in *S. cerevisiae* cell extracts (A,B). Antibodies tested include Rap1 (yN-18): sc-6662 (A) and Rap1 (yC-19): sc-6663 (B).

SELECT PRODUCT CITATIONS

- Galy, V., et al. 2000. Nuclear pore complexes in the organization of silent telomeric chromatin. *Nature* 403: 108-112.
- Tomar, R.S., et al. 2008. Yeast Rap1 contributes to genomic integrity by activating DNA damage repair genes. *EMBO J.* 27: 1575-1584.

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 or our catalog for detailed protocols and support products.


 MONOS
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Try **Rap1 (G-7): sc-374297** or **Rap1 (E-11): sc-373790**, our highly recommended monoclonal alternatives to Rap1 (yN-18).