

# RAP80 (P-16): sc-107989

## BACKGROUND

Receptor-associated protein 80 (RAP80), also known as ubiquitin interaction motif-containing protein 1 (UIMC1) or retinoid X receptor-interacting protein 110 (RXRIP110), is a 719 amino acid protein. Acting as a transcription repressor, RAP80 interacts with GCNF, thereby blocking GCNF interaction with the corepressor N-CoR. Localized to the nucleus, RAP80 is phosphorylated upon DNA damage. RAP80 contains two nuclear localization signals and one UIM (ubiquitin-interacting motif) repeat in the N-terminus, while the C-terminus contains two zinc fingers, a third nuclear localization signal and a potential PEST sequence. RAP80 is expressed as four isoforms produced by alternative splicing and is present in thymus, testis, heart and ovary.

## REFERENCES

1. Yan, J., Yang, X.P., Kim, Y.S., Joo, J.H. and Jetten, A.M. 2007. RAP80 interacts with the SUMO-conjugating enzyme UBC9 and is a novel target for sumoylation. *Biochem. Biophys. Res. Commun.* 362: 132-138.
2. Yan, J., Kim, Y.S., Yang, X.P., Li, L.P., Liao, G., Xia, F. and Jetten, A.M. 2007. The ubiquitin-interacting motif containing protein RAP80 interacts with BRCA1 and functions in DNA damage repair response. *Cancer Res.* 67: 6647-6656.
3. Wang, B. and Elledge, S.J. 2007. UBC13/RNF8 ubiquitin ligases control foci formation of the RAP80/Abraxas/BRCA1/BRCC36 complex in response to DNA damage. *Proc. Natl. Acad. Sci. USA* 104: 20759-20763.
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5. Yan, J. and Jetten, A.M. 2008. RAP80 and RNF8, key players in the recruitment of repair proteins to DNA damage sites. *Cancer Lett.* 271: 179-190.
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7. Osorio, A., Barroso, A., García, M.J., Martínez-Delgado, B., Urioste, M. and Benítez, J. 2009. Evaluation of the BRCA1 interacting genes RAP80 and CCDC98 in familial breast cancer susceptibility. *Breast Cancer Res. Treat.* 113: 371-376.
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9. Novak, D.J., Sabbaghian, N., Maillet, P., Chappuis, P.O., Foulkes, W.D. and Tischkowitz, M. 2009. Analysis of the genes coding for the BRCA1-interacting proteins, RAP80 and Abraxas (CCDC98), in high-risk, non-BRCA1/2, multiethnic breast cancer cases. *Breast Cancer Res. Treat.* 117: 453-459.

## CHROMOSOMAL LOCATION

Genetic locus: UIMC1 (human) mapping to 5q35.2; Uimc1 (mouse) mapping to 13 B1.

## RESEARCH USE

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

## SOURCE

RAP80 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RAP80 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-107989 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RAP80 (P-16) is recommended for detection of RAP80 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RAP80 siRNA (h): sc-92007, RAP80 shRNA Plasmid (h): sc-92007-SH and RAP80 shRNA (h) Lentiviral Particles: sc-92007-V.

Molecular Weight of RAP80: 80 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. 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.

## SELECT PRODUCT CITATIONS

1. Desideri, E., Vegliante, R., Cardaci, S., Nepravishta, R., Paci, M. and Ciriolo, M.R. 2014. MAPK14/p38α-dependent modulation of glucose metabolism affects ROS levels and autophagy during starvation. *Autophagy* 10: 1652-1665.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.