RAP80 (E-17): sc-107987



The Power to Question

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.
- 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.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609433. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Novak, D.J., Sabbaghian, N., Maillet, P., Chappuis, P.O., Foulkes, W.D. and Tischkowitz, M. 2008. 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. E-Published.
- 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.
- 7. Yan, J., Yang, X.P., Kim, Y.S. and Jetten, A.M. 2008. RAP80 responds to DNA damage induced by both ionizing radiation and UV irradiation and is phosphorylated at Ser 205. Cancer Res. 68: 4269-4276.
- 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.
- 9. Akbari, M.R., Ghadirian, P., Robidoux, A., Foumani, M., Sun, Y., Royer, R., Zandvakili, I., Lynch, H. and Narod, S.A. 2009. Germline RAP80 mutations and susceptibility to breast cancer. Breast Cancer Res. Treat. 113: 377-381.

CHROMOSOMAL LOCATION

Genetic locus: Uimc1 (mouse) mapping to 13 B1.

STORAGE

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

SOURCE

RAP80 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RAP80 of mouse 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-107987 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAP80 (E-17) is recommended for detection of RAP80 of mouse and rat 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).

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.

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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**