# RAP80 (C-13): sc-107986



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.
- 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.
- 4. 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. 117: 453-459.
- 6. 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.
- 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.

## **CHROMOSOMAL LOCATION**

Genetic locus: UIMC1 (human) mapping to 5g35.2.

#### SOURCE

RAP80 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RAP80 of human origin.

# **RESEARCH USE**

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

#### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107986 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

RAP80 (C-13) is recommended for detection of RAP80 of 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) 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

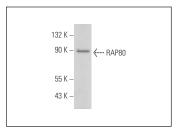
Molecular Weight of RAP80: 80 kDa.

Positive Controls: Hs 181 Tes whole cell lysate: sc-364779.

## **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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## **DATA**



RAP80 (C-13): sc-107986. Western blot analysis of RAP80 expression in Hs 181 Tes whole cell lysate.

# **STORAGE**

Store at 4° C, \*\*D0 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.