

# CCDC98 (N-12): sc-104125

## BACKGROUND

Coiled-coil domain-containing protein 98 (CCDC98), also known as FAM175A and ABRA1, is a 409 amino acid member of the FAM175 family. Functioning as a breast cancer-1 (BRCA1) interacting protein, CCDC98 co-localizes with BRCA1 to play a role in DNA repair. BRCA1 is a protein that is recruited to DNA breaks and participates in checkpoint regulations, specifically during S phase and at the G<sub>2</sub>/M transition. CCDC98 acts upstream of BRCA1 and regulates BRCA1 in DNA repair and checkpoint regulations in a phosphorylation-dependent manner. Moreover, CCDC98 has been shown to be necessary for the formation of BRCA1 foci in response to ionizing radiation.

## REFERENCES

- Kim, H., Huang, J. and Chen, J. 2007. CCDC98 is a BRCA1-BRCT domain-binding protein involved in the DNA damage response. *Nat. Struct. Mol. Biol.* 14: 710-715.
- Liu, Z., Wu, J. and Yu, X. 2007. CCDC98 targets BRCA1 to DNA damage sites. *Nat. Struct. Mol. Biol.* 14: 716-720.
- 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.
- Wang, B., Matsuoka, S., Ballif, B.A., Zhang, D., Smogorzewska, A., Gygi, S.P. and Elledge, S.J. 2007. Abraxas and RAP80 form a BRCA1 protein complex required for the DNA damage response. *Science* 316: 1194-1198.
- 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.
- Rodriguez, M.C. and Songyang, Z. 2008. BRCT domains: phosphopeptide binding and signaling modules. *Front. Biosci.* 13: 5905-5915.
- Kim, H. and Chen, J. 2008. New players in the BRCA1-mediated DNA damage responsive pathway. *Mol. Cells* 25: 457-461.
- Osorio, A., Barroso, A., Garcia, 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.
- 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: FAM175A (human) mapping to 4q21.23; Fam175a (mouse) mapping to 5 E4.

## SOURCE

CCDC98 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CCDC98 of human origin.

## RESEARCH USE

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

## 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-104125 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CCDC98 (N-12) is recommended for detection of CCDC98 of mouse, rat 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); non cross-reactive with other CCDC family members.

Suitable for use as control antibody for CCDC98 siRNA (h): sc-105186, CCDC98 siRNA (m): sc-142163, CCDC98 shRNA Plasmid (h): sc-105186-SH, CCDC98 shRNA Plasmid (m): sc-142163-SH, CCDC98 shRNA (h) Lentiviral Particles: sc-105186-V and CCDC98 shRNA (m) Lentiviral Particles: sc-142163-V.

Molecular Weight of CCDC98: 47 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.

## 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.


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