SANTA CRUZ BIOTECHNOLOGY, INC.

CCDC98 (A-3): sc-376951

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 colocalizes 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_2/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

1. Kim, H., et al. 2007. CCDC98 is a BRCA1-BRCT domain-binding protein involved in the DNA damage response. Nat. Struct. Mol. Biol. 14: 710-715.
2. Liu, Z., et al. 2007. CCDC98 targets BRCA1 to DNA damage sites. Nat. Struct. Mol. Biol. 14: 716-720.
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. Wang, B., et al. 2007. Abraxas and RAP80 form a BRCA1 protein complex required for the DNA damage response. Science 316: 1194-1198.
5. Novak, D.J., et al. 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.
7. Rodriguez, M.C. and Songyang, Z. 2008. BRCT domains: phosphopeptide binding and signaling modules. Front. Biosci. 13: 5905-5915.

CHROMOSOMAL LOCATION

Genetic locus: FAM175A (human) mapping to 4q21.23; Fam175a (mouse) mapping to 5 E4.

SOURCE

CCDC98 (A-3) is a mouse monoclonal antibody raised against amino acids 33-132 mapping within an internal region of CCDC98 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CCDC98 (A-3) is available conjugated to agarose (sc-376951 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376951 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376951 PE), fluorescein (sc-376951 FITC), Alexa Fluor® 488 (sc-376951 AF488), Alexa Fluor® 546 (sc-376951 AF546), Alexa Fluor® 594 (sc-376951 AF594) or Alexa Fluor® 647 (sc-376951 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376951 AF680) or Alexa Fluor® 790 (sc-376951 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CCDC98 (A-3) is recommended for detection of CCDC98 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

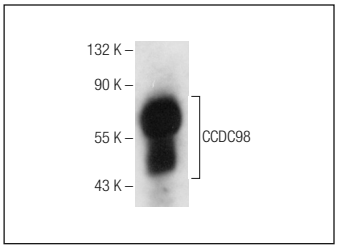
Molecular Weight of CCDC98: 47 kDa.

Positive Controls: human testis extract: sc-363781.

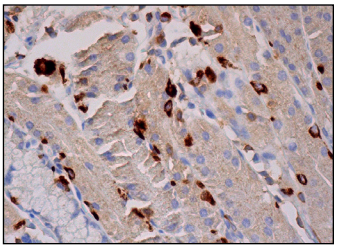
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CCDC98 (A-3): sc-376951. Western blot analysis of CCDC98 expression in human testis tissue extract.



CCDC98 (A-3): sc-376951. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of subset of glandular cells.

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.