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CCDC98 Antibody

Catalog # ASC10578

Product Information

Application	WB, E, IHC-P
Primary Accession	Q6UWZ7
Other Accession	NP_620775, 109148531
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	46663
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CCDC98 antibody can be used for detection of CCDC98 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	84142
Other Names	BRCA1-A complex subunit Abraxas, Coiled-coil domain-containing protein 98, Protein FAM175A, FAM175A, ABRA1, CCDC98
Target/Specificity	FAM175A;
Reconstitution & Storage	CCDC98 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CCDC98 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABRAXAS1 (HGNC:25829)
Function	Involved in DNA damage response and double-strand break (DSB) repair. Component of the BRCA1-A complex, acting as a central scaffold protein that assembles the various components of the complex and mediates the recruitment of BRCA1. The BRCA1-A complex specifically recognizes 'Lys-63'-linked ubiquitinated histones H2A and H2AX at DNA lesion sites, leading to target the BRCA1-BARD1 heterodimer to sites of DNA damage at DSBs. This complex also possesses deubiquitinase activity that specifically removes 'Lys-63'-linked ubiquitin on histones H2A and H2AX.

Cellular Location	Nucleus Note=Localizes at sites of DNA damage at double-strand breaks (DSBs)

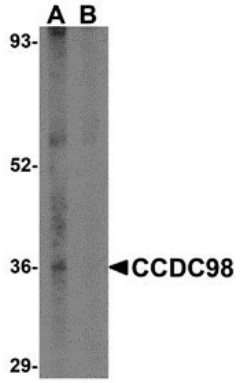
Background

CCDC98 Antibody: CCDC98, also known as Abraxas 1, was identified through protein binding studies using the breast and ovarian predisposition protein BRCA1 as the binding target. CCDC98 recruits RAP80, a ubiquitin-binding protein, to BRCA1, allowing the formation of BRCA1 foci in response to DNA damage caused by ionizing radiation. Both CCDC98 and RAP80 are required for DNA damage resistance, G2-M checkpoint control, and DNA repair. Cells depleted of either CCDC98 or RAP80 exhibited increased sensitivity to ionizing radiation, although not as much as in BRCA1-depleted cells, suggesting that CCDC98 and RAP80 control only part of the DNA damage response role of BRCA1. At least two isoforms of CCDC98 are known to exist.

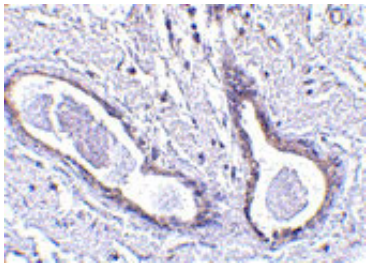
References

Wang B, Matsuoka S, Balliff BA, et al. Abraxas and RAP80 form a BRCA1 protein complex required for the DNA damage response. Science2007; 316:1194-1198.
Kim H, Huang J, and Chen J. CCDC98 is a BRCA1-BRCT domain-binding protein involved in the DNA damage response. Nat. Struct. Mol. Biol.2007; 14:710-5.
Liu Z, Wu J, and Yu X. CCDC98 targets BRCA1 to DNA damage sites. Nat. Struct. Mol. Biol.2007; 14:716-20.

Images



Western blot analysis of CCDC98 in human breast tissue lysate in (A) the absence and (B) presence of blocking peptide with CCDC98 antibody at 1 µg/mL.



Immunohistochemistry of CCDC98 in human breast tissue with CCDC98 antibody at 5 µg/mL.