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CENPW Antibody

Catalog # ASC11513

Product Information

Application	WB, E
Primary Accession	Q5EE01
Other Accession	NP_001012525, 60302883
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	10061
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CENPW antibody can be used for detection of CENPW by Western blot at 0.5 - 1 □g/mL.

Additional Information

Gene ID	387103
Other Names	Centromere protein W, CENP-W, Cancer-up-regulated gene 2 protein, CENPW, C6orf173, CUG2
Target/Specificity	CENPW; At least three isoforms of CENPW are known to exist; this antibody will detect all three isoforms.
Reconstitution & Storage	CENPW 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	CENPW Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CENPW
Synonyms	C6orf173, CUG2
Function	Component of the CENPA-NAC (nucleosome-associated) complex, a complex that plays a central role in assembly of kinetochore proteins, mitotic progression and chromosome segregation (By similarity). The CENPA-NAC complex recruits the CENPA-CAD (nucleosome distal) complex and may be involved in incorporation of newly synthesized CENPA into centromeres (By similarity). Part of a nucleosome-associated complex that binds specifically to histone H3-containing nucleosomes at the centromere, as opposed to

	nucleosomes containing CENPA. Component of the heterotetrameric CENP-T-W-S-X complex that binds and supercoils DNA, and plays an important role in kinetochore assembly. CENPW has a fundamental role in kinetochore assembly and function. It is one of the inner kinetochore proteins, with most further proteins binding downstream. Required for normal chromosome organization and normal progress through mitosis.
Cellular Location	Nucleus. Chromosome, centromere. Chromosome, centromere, kinetochore. Nucleus matrix. Nucleus, nucleolus. Note=Constitutively localizes to centromeres throughout the cell cycle, and to the inner kinetochore during mitosis. {ECO:0000250|UniProtKB:P0DJH6}
Tissue Location	Highly expressed in ovary, liver, lung and pancreas and to a lower extent in breast and gastrointestinal tract cancers; such as those of the colon, rectum and stomach. Overexpressed in high grade breast invasive tumors. Expressed in many cancer cell types

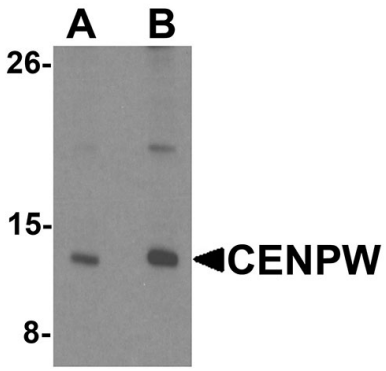
Background

CENPW Antibody: CENPW was initially identified as a gene that was upregulated in multiple cancers, and whose overexpression in mouse fibroblast cells gave rise to distinct cancer-specific phenotypes. It was later found to be a nuclear protein that associated with CENPT, a component of CENPA nucleosome complex in the centromere, and is required for proper kinetochore function. CENPW also specifically interacts with the nucleolar phosphoprotein nucleophosmin, also known as B23 It has been suggested that nucleophosmin functions in the assembly of the kinetochore by interacting with CENPW during interphase. Overexpression of CENPW in the SKOV-3 human ovarian cancer cell line as well as in the zebrafish embryo led to apoptosis, suggesting that high levels of CENPW induces apoptotic cell death.

References

Lee S, Gang J, Jeon SB, et al. molecular cloning and functional analysis of a novel oncogene, cancer-upregulated gene 2 (CUG2). Biochem. Biophys. Res. Commun. 2007; 360:633-9.
Kim H, Lee M, Lee S, et al. Cancer-upregulated gene 2 (CUG2), a new component of centromere complex, is required for kinetochore function. Mol. Cells 2009; 27:697-701.
Chun Y, Park B, Koh W, et al. New centromeric component CENT-W is an RNA-associated nuclear matrix protein that interacts with nucleophosmin/B23 protein. J. Biol. Chem. 2011; 286:42758-69.
Lee S, Koh W, Kim HT, et al. Cancer-upregulated gene 2 (CUG2) overexpression induces apoptosis in SKOV-3 cells. Cell Biochem. Funct. 2010; 28:461-8.

Images



Western blot analysis of CENPW in HeLa cell lysate lysate with CENPW antibody at (A) 0.5 and (B) 1 µg/mL.