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CDCA8 Antibody

Catalog # ASC10745

Product Information

Application	WB, IF, E
Primary Accession	Q53HL2
Other Accession	NP_060571, 8922438
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	31323
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CDCA8 antibody can be used for detection of CDCA8 by Western blot at 1 and 2 g/mL. Antibody can also be used for immunoflourescence starting at 20 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	55143
Other Names	Borealin, Cell division cycle-associated protein 8, Dasra-B, hDasra-B, Pluripotent embryonic stem cell-related gene 3 protein, CDCA8, PESCRG3
Target/Specificity	CDCA8;
Reconstitution & Storage	CDCA8 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	CDCA8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDCA8
Synonyms	PESCRG3
Function	Component of the chromosomal passenger complex (CPC), a complex that acts as a key regulator of mitosis. The CPC complex has essential functions at the centromere in ensuring correct chromosome alignment and segregation and is required for chromatin-induced microtubule stabilization and spindle assembly. Major effector of the TTK kinase in the control of attachment-error-correction and chromosome alignment.

Cellular Location	Nucleus, nucleolus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Chromosome, centromere. Note=Localizes on chromosome arms and inner centromeres from prophase through metaphase and then transferring to the spindle midzone and midbody from anaphase through cytokinesis Colocalizes with SENP3 in the nucleolus in interphase cells

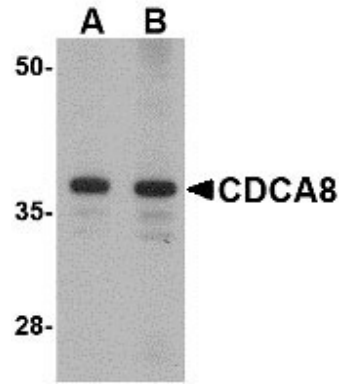
Background

CDCA8 Antibody: CDCA8 is a component of a chromosomal passenger complex (CPC) required for stability of the bipolar mitotic spindle. The chromosomal passenger complex, which includes Survivin, CDCA8, INCENP and Aurora-B, is known to play crucial roles during mitosis and cell division. It was found that CDCA8 interacting with Aurora-B, INCENP and Survivin, increases during G2/M phase and then reduces after exit from M phase. CDCA8 is cell cycle regulated, down-regulated in response to p53/Rb-signaling, and up-regulated in many types of cancerous tissues. In Drosophila cells, inactivation of CDCA8 results in polyploidy, delayed mitosis and abnormal tissue development, indicating its critical role for cell proliferation. Recent studies show that CDCA8 is essential for cell proliferation during early embryonic development, and its early embryonic lethality cannot be rescued by the loss of p53. Its aberrant expression is linked to a poor prognosis for gastric cancer.

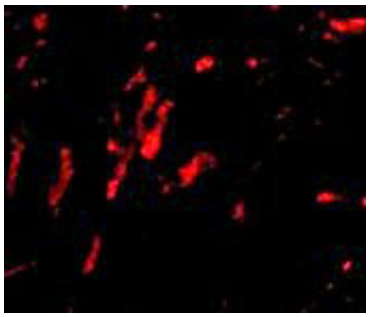
References

Gassmann R, Carvalho A, Hanzing AJ, et al. Borealin: a novel chromosomal passenger required for stability of the bipolar mitotic spindle. J. Cell Biol.2004; 166:179-91.
Tani M, Okino N, Mitsutake S, et al. Molecular Cloning of the Full-length cDNA Encoding Mouse Neutral Ceramidase. J. Biol. Chem.2000; 275:11229-34.
Hanson KK, Kelley AC, and Bienz M Loss of Drosophila borealin causes polyploidy, delayed apoptosis and abnormal tissue development. Development2005; 132:4777-87.
Date DA, Jacob CJ, Bekier ME et al. Borealin is repressed in response to p53/Rb signaling. Cell Biol. Int.2007; 31:1470-81.

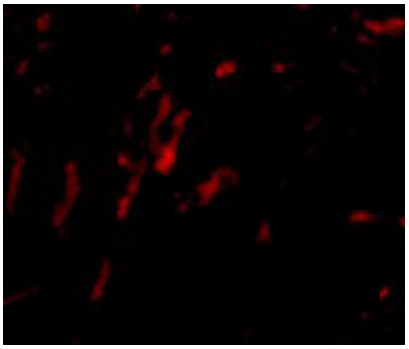
Images



Western blot analysis of CDCA8 in Rat kidney lysate with CDCA8 antibody at (A) 1 and (B) 2 µg/mL.



Immunofluorescence of CDCA8 in rat kidney tissue with CDCA8 antibody at 20 µg/mL.



Immunofluorescence of CDCA8 in Rat Kidney cells with CDCA8 antibody at 20 µg/mL.