10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CASC5 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21540b

Product Information

Application	WB, E
Primary Accession	Q8NG31
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53820
Calculated MW	265391

Additional Information

Gene ID	57082
Other Names	Protein CASC5, ALL1-fused gene from chromosome 15q14 protein, AF15q14, Bub-linking kinetochore protein, Blinkin, Cancer susceptibility candidate gene 5 protein, Cancer/testis antigen 29, CT29, Kinetochore-null protein 1, Protein D40/AF15q14, CASC5, KIAA1570, KNL1
Target/Specificity	This CASC5 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 2324-2357 amino acids from human CASC5.
Dilution	WB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CASC5 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KNL1 (HGNC:24054)
Function	Acts as a component of the outer kinetochore KNL1 complex that serves as a docking point for spindle assembly checkpoint components and mediates microtubule-kinetochore interactions (PubMed:15502821, PubMed:17981135,

	PubMed:18045986, PubMed:19893618, PubMed:21199919, PubMed:22000412, PubMed:22331848, PubMed:27881301, PubMed:30100357). Kinetochores, consisting of a centromere-associated inner segment and a microtubule-contacting outer segment, play a crucial role in chromosome segregation by mediating the physical connection between centromeric DNA and spindle microtubules (PubMed:18045986, PubMed:19893618, PubMed:27881301). The outer kinetochore is made up of the ten-subunit KMN network, comprising the MIS12, NDC80 and KNL1 complexes, and auxiliary microtubule-associated components; together they connect the outer kinetochore with the inner kinetochore, bind microtubules, and mediate interactions with mitotic checkpoint proteins that delay anaphase until chromosomes are bioriented on the spindle (PubMed:17981135, PubMed:19893618, PubMed:22000412, PubMed:38459127, PubMed:38459128). Required for kinetochore binding by a distinct subset of kMAPs (kinetochore-bound microtubule-associated proteins) and motors (PubMed:19893618). Acts in coordination with CENPK to recruit the NDC80 complex to the outer kinetochore (PubMed:18045986, PubMed:27881301). Can bind either to microtubules or to the protein phosphatase 1 (PP1) catalytic subunits PPP1CA and PPP1CC (via overlapping binding sites), it has higher affinity for PP1 (PubMed:30100357). Recruits MAD2L1 to the kinetochore and also directly links BUB1 and BUB1B to the kinetochore (PubMed:17981135, PubMed:19893618, PubMed:22000412, PubMed:22331848, PubMed:25308863). In addition to orienting mitotic chromosomes, it is also essential for alignment of homologous chromosomes during meiotic metaphase I (By similarity). In meiosis I, required to activate the spindle assembly checkpoint at unattached kinetochores to correct erroneous kinetochore-microtubule attachments (By similarity).
Cellular Location	Nucleus. Chromosome, centromere, kinetochore. Cytoplasm {ECO:0000250|UniProtKB:Q66JQ7}. Note=Weakly expressed in interphase nuclei. Expression increases from prophase to late anaphase, but greatly diminishes from the telophase and cytokinesis to early G1 phase of cell cycle (PubMed:19893618). Localizes to the cytoplasm during meiotic prophase I and then the nucleus as meiosis progresses (By similarity). {ECO:0000250|UniProtKB:Q66JQ7, ECO:0000269|PubMed:19893618}
Tissue Location	Highly expressed in testis, where it is localized in germ cells, in particular in spermatocytes and in the pre-acrosome of round spermatids. Detected in the acrosome of ejaculated spermatozoa. Detected in adult thymus, bone marrow, colon, small intestine, appendix and placenta, and in fetal liver and thymus

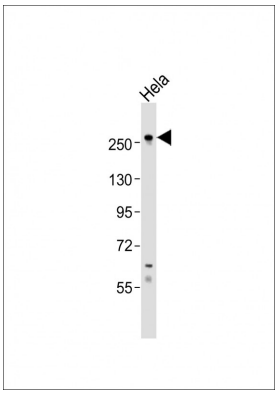
Background

Performs two crucial functions during mitosis: it is essential for spindle-assembly checkpoint signaling and for correct chromosome alignment. Required for attachment of the kinetochores to the spindle microtubules. Directly links BUB1 and BUB1B to kinetochores. Part of the MIS12 complex, which may be fundamental for kinetochore formation and proper chromosome segregation during mitosis. Acts in coordination with CENPK to recruit the NDC80 complex to the outer kinetochore.

References

Hayette S.,et al.Oncogene 19:4446-4450(2000).
Takimoto M.,et al.Br. J. Cancer 86:1757-1762(2002).
Kuefer M.U.,et al.Oncogene 22:1418-1424(2003).
Zody M.C.,et al.Nature 440:671-675(2006).
Nagase T.,et al.DNA Res. 7:273-281(2000).

Images



Anti-CASC5 Antibody (C-Term)at 1:500 dilution + Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 265 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.