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CENPE Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17985b

Product Information

Application	WB, E
Primary Accession	Q02224
Other Accession	NP_001804
Reactivity	Human
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17611
Calculated MW	316415
Antigen Region	2573-2601

Additional Information

Gene ID	1062
Other Names	Centromere-associated protein E, Centromere protein E, CENP-E, Kinesin-related protein CENPE, CENPE
Target/Specificity	This CENPE antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 2573-2601 amino acids from the C-terminal region of human CENPE.
Dilution	WB~~1:1000 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	CENPE Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CENPE (HGNC:1856)
Function	Microtubule plus-end-directed kinetochore motor which plays an important role in chromosome congression, microtubule-kinetochore conjugation and

	spindle assembly checkpoint activation. Drives chromosome congression (alignment of chromosomes at the spindle equator resulting in the formation of the metaphase plate) by mediating the lateral sliding of polar chromosomes along spindle microtubules towards the spindle equator and by aiding the establishment and maintenance of connections between kinetochores and spindle microtubules (PubMed:23891108, PubMed:25395579, PubMed:7889940). The transport of pole-proximal chromosomes towards the spindle equator is favored by microtubule tracks that are detyrosinated (PubMed:25908662). Acts as a processive bi-directional tracker of dynamic microtubule tips; after chromosomes have congressed, continues to play an active role at kinetochores, enhancing their links with dynamic microtubule ends (PubMed:23955301). Suppresses chromosome congression in NDC80-depleted cells and contributes positively to congression only when microtubules are stabilized (PubMed:25743205). Plays an important role in the formation of stable attachments between kinetochores and spindle microtubules (PubMed:17535814) The stabilization of kinetochore- microtubule attachment also requires CENPE-dependent localization of other proteins to the kinetochore including BUB1B, MAD1 and MAD2. Plays a role in spindle assembly checkpoint activation (SAC) via its interaction with BUB1B resulting in the activation of its kinase activity, which is important for activating SAC. Necessary for the mitotic checkpoint signal at individual kinetochores to prevent aneuploidy due to single chromosome loss (By similarity).
Cellular Location	Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Chromosome, centromere. Note=Associates with kinetochores during congression (as early as prometaphase), relocates to the spindle midzone at anaphase, and is quantitatively discarded at the end of the cell division (By similarity). Recruited to the kinetochore in a SEPT7, CENPQ and TRAPPC12-dependent manner (PubMed:18460473, PubMed:25395579, PubMed:25918224). Recruited to the pericentromeric/centromeric regions of the chromosome in a CTCF- dependent manner (PubMed:26321640). {ECO:0000250|UniProtKB:Q6RT24, ECO:0000269|PubMed:18460473, ECO:0000269|PubMed:25395579, ECO:0000269|PubMed:25918224, ECO:0000269|PubMed:26321640}

Background

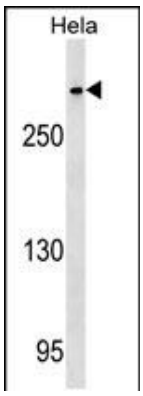
Centrosome-associated protein E is a kinesin-like motor protein that accumulates in the G2 phase of the cell cycle. Unlike other centrosome-associated proteins, it is not present during interphase and first appears at the centromere region of chromosomes during prometaphase. CENPE is proposed to be one of the motors responsible for mammalian chromosome movement and/or spindle elongation.

References

Kim, Y., et al. Cell 142(3):444-455(2010)
Maia, A.F., et al. Chromosoma 119(4):405-413(2010)
Kalsi, G., et al. Hum. Mol. Genet. 19(12):2497-2506(2010)
Maffini, S., et al. Curr. Biol. 19(18):1566-1572(2009)
Liu, Z., et al. J. Exp. Clin. Cancer Res. 28, 156 (2009) :

Images

CENPE Antibody (C-term) (Cat. #AP17985b) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the CENPE antibody detected the CENPE



protein (arrow).

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