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

CENPE Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP17985b

Specification

CENPE Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q02224

CENPE Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 1062

Other Names
Centromere-associated protein E, Centromere protein E, CENP-E, Kinesin-related protein CENPE, CENPE

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CENPE Antibody (C-term) Blocking Peptide - Protein Information

Name CENPE

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:7889940, PubMed:23891108, PubMed:25395579). 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:<a href="http://www.uniprot.org/citations/25743205"

target="_blank">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:25918224, PubMed:25395579). 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}

CENPE Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CENPE Antibody (C-term) Blocking Peptide - Images

CENPE Antibody (C-term) Blocking Peptide - Background

Centrosome-associated protein E is a kinesin-like motorprotein that accumulates in the G2 phase of the cell cycle. Unlikeother centrosome-associated proteins, it is not present duringinterphase and first appears at the centromere region ofchromosomes during prometaphase. CENPE is proposed to be one of themotors responsible for mammalian chromosome movement and/or spindleelongation.

CENPE Antibody (C-term) Blocking Peptide - 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) :