

**Anti-CENP-E (MOUSE) Monoclonal Antibody**  
**CENP-E**  
**Catalog # ASR4166**

**Specification**

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**Anti-CENP-E (MOUSE) Monoclonal Antibody - Product Information**

Host	<b>Mouse</b>
Conjugate	<b>Unconjugated</b>
Target Species	<b>Human</b>
Reactivity	<b>Human</b>
Clonality	<b>Monoclonal</b>
Application	<b>WB, E, IP, I, LCI</b>
Application Note	<b>This protein A purified antibody has been tested for use in immunoprecipitation, immunofluorescence staining and western blot and is capable of detecting endogenous protein. Specific conditions for reactivity should be optimized by the end user. Expect a predominant band at ~ 320 kDa corresponding to full-length protein by western blotting in the appropriate cell lysate or extract.</b>
Physical State	<b>Liquid (sterile filtered)</b>
Buffer	<b>0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2</b>
Immunogen	<b>This protein A purified monoclonal antibody was produced by repeated immunizations with a full length recombinant protein corresponding to human CENP-E protein.</b>
Preservative	<b>0.01% (w/v) Sodium Azide</b>

**Anti-CENP-E (MOUSE) Monoclonal Antibody - Additional Information**

**Gene ID** 1062

**Other Names**  
1062

**Purity**

This Protein A purified antibody is directed against human CENP-E protein. The product was purified from tissue culture supernatant by chromatography. This antibody reacts with CENP-E from human cells. Reactivity against homologues from other sources is not known.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

## Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-CENP-E (MOUSE) Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/23891108" target="\_blank">23891108</a>, PubMed:<a href="http://www.uniprot.org/citations/25395579" target="\_blank">25395579</a>, PubMed:<a href="http://www.uniprot.org/citations/7889940" target="\_blank">7889940</a>). The transport of pole-proximal chromosomes towards the spindle equator is favored by microtubule tracks that are detyrosinated (PubMed:<a href="http://www.uniprot.org/citations/25908662" target="\_blank">25908662</a>). 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:<a href="http://www.uniprot.org/citations/23955301" target="\_blank">23955301</a>). 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</a>). Plays an important role in the formation of stable attachments between kinetochores and spindle microtubules (PubMed:<a href="http://www.uniprot.org/citations/17535814" target="\_blank">17535814</a>). 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}

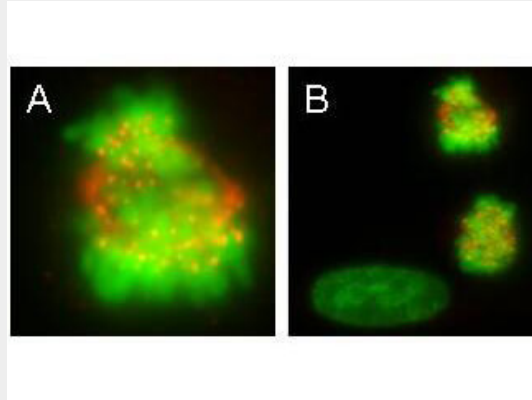
## Anti-CENP-E (MOUSE) Monoclonal Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-CENP-E (MOUSE) Monoclonal Antibody - Images



Rockland's monoclonal anti-CENPE antibody was used to detect CENPE protein, visible as discrete nuclear dots on prometaphase and metaphase cells that relocate to the spindle midzone at anaphase (panel A). Interphase cells show no discrete staining (bottom left, panel B). HeLa cells were fixed in paraformaldehyde and stained using this primary antibody. AlexaFluor 555™ conjugated anti-Mouse antibody (red) was used for detection. DNA was stained using bis-benzimide (DAPI) (green). Personal Communication, Tim Yen, Fox Chase Cancer Center, Philadelphia, PA.

### Anti-CENP-E (MOUSE) Monoclonal Antibody - Background

CENP-E, Centrosome-associated protein E, is a kinesin-like minus-end directed microtubule 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. CENP-E is proposed to be one of the motors responsible for mammalian chromosome movement and/or spindle elongation. CENP-E interacts with CENP-F and BUBR1 kinase. CENP-E associates with kinetochores during congression, relocates to the spindle midzone at anaphase, and is quantitatively discarded at the end of the cell division.