

**CENP-E (E5N7B) Rabbit mAb**

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For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W             | H           | Endogenous   | 270       | Rabbit IgG      | #Q02224     | 1062            |

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

CENP-E (E5N7B) Rabbit mAb recognizes endogenous levels of total CENP-E protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro333 of human CENP-E protein.

**Background**

Centromere-associated protein E (CENP-E) is a kinesin-like motor protein and mitotic-checkpoint kinase BUB1B binding partner that is essential for establishing and maintaining stable attachments between mitotic chromosomes and spindle microtubules (1). CENP-E plays an important role as a motor protein in the alignment of chromosomes during prometaphase (2). Research studies indicate that CENP-E protein expression peaks in late G2 and M-phases of the cell cycle before the protein is degraded at mitotic exit (3). Additional studies show that the loss of CENP-E function results in cell cycle arrest in mitosis. Mutations in the corresponding *CENPE* gene can result in autosomal recessive primary microcephaly-13, a developmental disorder characterized by small head circumference, dysmorphic facial features, short stature, and delayed psychomotor development (4). Since CENP-E is essential for mitotic progression and is required for cellular proliferation, it has become an interesting target for cancer therapy (5-7).

**Background References**

1. Yao, X. et al. (2000) *Nat Cell Biol* 2, 484-91.
2. Yardimci, H. et al. (2008) *Proc Natl Acad Sci U S A* 105, 6016-21.
3. Brown, K.D. et al. (1994) *J Cell Biol* 125, 1303-12.
4. Mirzaa, G.M. et al. (2014) *Hum Genet* 133, 1023-39.
5. Wood, K.W. et al. (2008) *Clin Cancer Res* 14, 7588-92.
6. Balamuth, N.J. et al. (2010) *Cancer Res* 70, 2749-58.
7. Kung, P.P. et al. (2014) *Mol Cancer Ther* 13, 2104-15.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human

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