

CENP-E Antibody



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

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 270	Source/Isotype: Rabbit	UniProt ID: #Q02224	Entrez-Gene Id: 1062
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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 and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CENP-E Antibody recognizes endogenous levels of total CENP-E protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val1897 of human CENP-E protein. Antibodies are purified by protein A and peptide affinity chromatography.

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 nonfat dry milk, 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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