

Store at
-20°C

CENP-E (E5N7B) Rabbit mAb

Cell Signaling
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#96351

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UniProt ID #Q02224

New 08/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W Endogenous	Species Cross-Reactivity* H	Molecular Wt. 270 kDa	Isotype Rabbit IgG**
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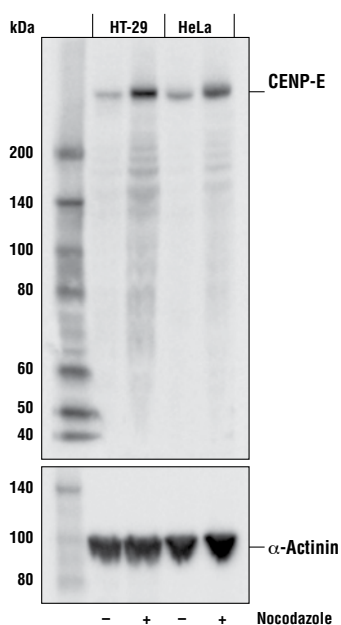
Background: Centromere-associated protein E (CENP-E) is a kinesin-like motor protein and mitotic-checkpoint kinase BUB1B binding partner that is essential for establishing and maintaining stable attachments between mitotic chromosomes and spindle microtubules (1). CENP-E plays an important role as a 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.

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.



Western blot analysis of extracts from HT-29 and HeLa cells, untreated (-) or treated with Nocodazole #2190 (100 ng/mL, 24 hr; +), using CENP-E (E5N7B) Rabbit mAb (upper) or α -Actinin (D6F6) XP® Rabbit mAb #6487 (lower).

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

*Species cross-reactivity is determined by western blot.
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.