

Product Name: CENPE (15A19) Rabbit Monoclonal Antibody
Catalog #: AMRe08639



Summary

Production Name	CENPE (15A19) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification	Affinity purification

Immunogen

Gene Name	CENPE
Alternative Names	CENP E; Centromere associated protein E; Centromere protein E 312kDa; KIF10; Kinesin family member 10; Kinesin related protein; PPP1R61;
Gene ID	1062.0
SwissProt ID	Q02224.

Application

Dilution Ratio	WB 1:500-1:2000
Molecular Weight	316kDa

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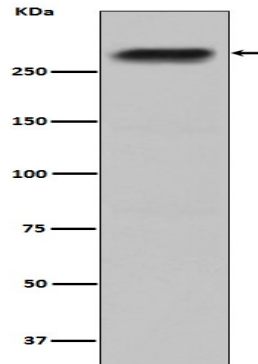
Background

CENPE is a 250-300 kDa human centromere-associated kinesin-like motor protein that accumulates in G2 phase. 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](http://www.uniprot.org/citations/7889940), PubMed:[23891108](http://www.uniprot.org/citations/23891108), PubMed:[25395579](http://www.uniprot.org/citations/25395579)). The transport of pole-proximal chromosomes towards the spindle equator is favored by microtubule tracks that are detyrosinated (PubMed:[25908662](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/23955301)). Suppresses chromosome congression in NDC80-depleted cells and contributes positively to congression only when microtubules are stabilized (PubMed:[25743205](http://www.uniprot.org/citations/25743205)). Plays an important role in the formation of stable attachments between kinetochores and spindle microtubules (PubMed:[17535814](http://www.uniprot.org/citations/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).

Research Area

Image Data

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Western blot analysis of CENPE expression in HepG2 cell lysate.

Note

For research use only.