SANTA CRUZ BIOTECHNOLOGY, INC.

CEP72 (H-300): sc-134620

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Centrosomes are the major microtubule-organizing centers of mammalian cells. They are composed of a centriole pair and surrounding microtubule-nucleating material termed pericentriolar material (PCM). Bipolar mitotic spindle assembly relies on two intertwined processes: centriole duplication and centrosome maturation. Failure to properly orchestrate centrosome duplication and maturation is subsequently linked to spindle defects, which can result in aneuploidy and promote cancer progression. CEP72 (centrosomal protein 72kDa) is a 647 amino acid protein that localizes to the centrosome and centrosome-surrounding particles throughout the cell cycle. Involved in the recruitment of key centrosomal proteins to the centrosome, CEP72 provides centrosomal microtubule-nucleation activity on the γ Tubulin ring complexes and has critical roles in forming a focused bipolar spindle, which is needed for proper tension generation between sister chromatids. CEP72 exists as two alternatively spliced isoforms.

REFERENCES

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2. Palazzo, R.E., et al. 2000. Centrosome maturation. Curr. Top. Dev. Biol. 49: 449-470.
3. Andersen, J.S., et al. 2003. Proteomic characterization of the human centrosome by protein correlation profiling. Nature 426: 570-574.
4. Valente, E.M., et al. 2006. Mutations in CEP290, which encodes a centrosomal protein, cause pleiotropic forms of Joubert syndrome. Nat. Genet. 38: 623-625.
5. Sayer, J.A., et al. 2006. The centrosomal protein nephrocystin-6 is mutated in Joubert syndrome and activates transcription factor ATF-4. Nat. Genet. 38: 674-681.
6. Pelletier, L., et al. 2006. Centriole assembly in *Caenorhabditis elegans*. Nature 444: 619-623.
7. Kang, J.U., et al. 2008. Gain at chromosomal region 5p15.33, containing TERT, is the most frequent genetic event in early stages of non-small cell lung cancer. Cancer Genet. Cytogenet. 182: 1-11.
8. Oshimori, N., et al. 2009. CEP72 regulates the localization of key centrosomal proteins and proper bipolar spindle formation. EMBO J. 28: 2066-2076.
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CHROMOSOMAL LOCATION

Genetic locus: CEP72 (human) mapping to 5p15.33.

SOURCE

CEP72 (H-300) is a rabbit polyclonal antibody raised against amino acids 348-647 mapping at the C-terminus of CEP72 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CEP72 (H-300) is recommended for detection of CEP72 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CEP72 siRNA (h): sc-92072, CEP72 shRNA Plasmid (h): sc-92072-SH and CEP72 shRNA (h) Lentiviral Particles: sc-92072-V.

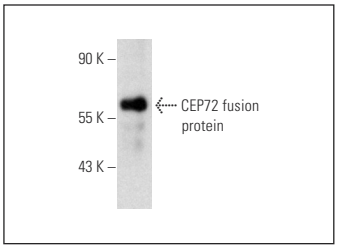
Molecular Weight of CEP72: 72 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232.

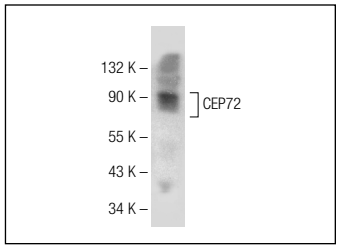
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CEP72 (H-300): sc-134620. Western blot analysis of human recombinant CEP72 fusion protein.



CEP72 (H-300): sc-134620. Western blot analysis of CEP72 expression in MDA-MB-231 whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.