

# CEP55 (D-12): sc-377044

## BACKGROUND

CEP55 (centrosomal protein of 55 kDa), also known as URCC6 (up-regulated in colon cancer 6), is a 464 amino acid protein that localizes to the centrosome during interphase and may be found throughout the cell during mitosis. Widely expressed with highest expression in testis and lower expression in thymus, bone marrow, placenta, fetal heart, digestive tract and several carcinomas, CEP55 exists as a homodimer that interacts with centrosome components and is involved in mitotic exit and cytokinesis. Human CEP55 undergoes several phosphorylation events throughout the cell cycle, most of which are necessary for proper CEP55 function. Mutations or defects in the gene encoding CEP55 result in a failure to exit mitosis and may be associated with tumor progression. Two isoforms of CEP55 are expressed due to alternative splicing events.

## REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610000. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Fabbro, M., et al. 2005. Cdk1/Erk2- and Plk1-dependent phosphorylation of a centrosome protein, CEP55, is required for its recruitment to midbody and cytokinesis. *Dev. Cell* 9: 477-488.
3. Doxsey, S.J. 2005. Molecular links between centrosome and midbody. *Mol. Cell* 20: 170-172.
4. Martinez-Garay, I., et al. 2006. The novel centrosomal associated protein CEP55 is present in the spindle midzone and the midbody. *Genomics* 87: 243-253.
5. Zhao, W.M., et al. 2006. CEP55, a microtubule-bundling protein, associates with centralspindlin to control the midbody integrity and cell abscission during cytokinesis. *Mol. Biol. Cell* 17: 3881-3896.
6. Morita, E., et al. 2007. Human ESCRT and ALIX proteins interact with proteins of the midbody and function in cytokinesis. *EMBO J.* 26: 4215-4227.
7. Carlton, J.G., et al. 2007. Parallels between cytokinesis and retroviral budding: a role for the ESCRT machinery. *Science* 316: 1908-1912.

## CHROMOSOMAL LOCATION

Genetic locus: CEP55 (human) mapping to 10q23.33; Cep55 (mouse) mapping to 19 C2.

## SOURCE

CEP55 (D-12) is a mouse monoclonal antibody raised against amino acids 163-462 mapping at the C-terminus of CEP55 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

CEP55 (D-12) is recommended for detection of CEP55 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 CEP55 siRNA (h): sc-90601, CEP55 siRNA (m): sc-142284, CEP55 shRNA Plasmid (h): sc-90601-SH, CEP55 shRNA Plasmid (m): sc-142284-SH, CEP55 shRNA (h) Lentiviral Particles: sc-90601-V and CEP55 shRNA (m) Lentiviral Particles: sc-142284-V.

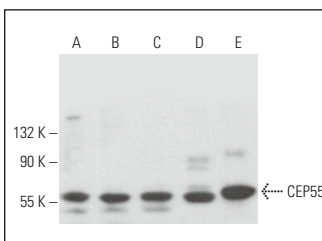
Molecular Weight of CEP55: 55 kDa.

Positive Controls: F9 cell lysate: sc-2245, c4 whole cell lysate: sc-364186 or M1 whole cell lysate: sc-364782.

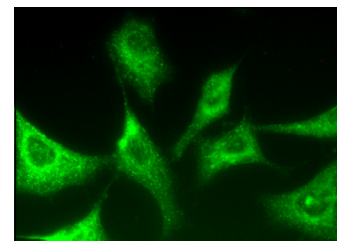
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CEP55 (D-12): sc-377044. Western blot analysis of CEP55 expression in c4 (A), F9 (B), M1 (C), TF-1 (D) and PC-12 (E) whole cell lysates.



CEP55 (D-12): sc-377044. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Tedeschi, A., et al. 2020. CEP55 promotes cytokinesis of neural progenitors but is dispensable for most mammalian cell divisions. *Nat. Commun.* 11: 1746.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.