

CEP152 (E-15): sc-164040

BACKGROUND

CEP152, also known as centrosomal protein of 152 kDa, MCPH4 or SCKL5, is a 1,654 amino acid protein that is required for centrosome duplication. CEP152 is responsible for regulating genomic integrity as well as initiating ATR-mediated checkpoint signaling in response to DNA damage. CEP152 interacts with Sak and CENPJ, which are important for centriole formation as well as the cyclin-dependent kinase 2-interacting protein (CINP). Defects in CEP152 leads to Seckel syndrome type 5 (SCKL5) and microcephaly primary type 4 (MCPH4), both of which are congenital diseases and cause mental retardation. CEP152 exists as three different alternatively spliced isoforms and is post-translationally phosphorylated at amino acid residue 1258 (tyrosine) and 1405 (serine). The gene encoding CEP152 maps to human chromosome 15.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 355-364.
2. Andersen, J.S., et al. 2003. Proteomic characterization of the human centrosome by protein correlation profiling. Nature 426: 570-574.
3. Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. Proc. Natl. Acad. Sci. USA 105: 10762-10767.
4. Heibeck, T.H., et al. 2009. An extensive survey of tyrosine phosphorylation revealing new sites in human mammary epithelial cells. J. Proteome Res. 8: 3852-3861.
5. Hatch, E.M., et al. 2010. Cep152 interacts with Plk4 and is required for centriole duplication. J. Cell Biol. 191: 721-729.
6. Cizmecioglu, O., et al. 2010. Cep152 acts as a scaffold for recruitment of Plk4 and CPAP to the centrosome. J. Cell Biol. 191: 731-739.
7. Dzhindzhev, N.S., et al. 2010. Asterless is a scaffold for the onset of centriole assembly. Nature 467: 714-718.
8. Kalay, E., et al. 2011. CEP152 is a genome maintenance protein disrupted in Seckel syndrome. Nat. Genet. 43: 23-26.

CHROMOSOMAL LOCATION

Genetic locus: CEP152 (human) mapping to 15q21.1; Cep152 (mouse) mapping to 2 F1.

SOURCE

CEP152 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CEP152 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.

Blocking peptide available for competition studies, sc-164040 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CEP152 (E-15) is recommended for detection of CEP152 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other CEP family members.

CEP152 (E-15) is also recommended for detection of CEP152 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for CEP152 siRNA (h): sc-90225, CEP152 siRNA (m): sc-142278, CEP152 shRNA Plasmid (h): sc-90225-SH, CEP152 shRNA Plasmid (m): sc-142278-SH, CEP152 shRNA (h) Lentiviral Particles: sc-90225-V and CEP152 shRNA (m) Lentiviral Particles: sc-142278-V.

Molecular Weight of CEP152 isoforms: 189/158/147 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.