SANTA CRUZ BIOTECHNOLOGY, INC.

CEP104 (G-11): sc-514475

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CEP104 (centrosomal protein 104 kDa), also known as KIAA0562 or GlyBP, is a 925 amino acid protein that localizes to the cytoplasm. CEP104 contains two heat domains, two coiled coils and is post-translationally phosphorylated at serine residue 323. CEP104 exists as three alternatively spliced isoforms and maps to human chromosome 1p36.32. Chromosome 1 is the largest chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes, there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1.

CHROMOSOMAL LOCATION

Genetic locus: CEP104 (human) mapping to 1p36.32; Cep104 (mouse) mapping to 4 E2.

SOURCE

CEP104 (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-33 at the N-terminus of KIAA0562 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CEP104 (G-11) is available conjugated to agarose (sc-514475 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514475 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514475 PE), fluorescein (sc-514475 FITC), Alexa Fluor® 488 (sc-514475 AF488), Alexa Fluor® 546 (sc-514475 AF546), Alexa Fluor® 594 (sc-514475 AF594) or Alexa Fluor® 647 (sc-514475 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514475 AF680) or Alexa Fluor® 790 (sc-514475 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514475 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CEP104 (G-11) is recommended for detection of CEP104 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 CEP104 siRNA (h): sc-78760, Cep104 siRNA (m): sc-141589, CEP104 shRNA Plasmid (h): sc-78760-SH, Cep104 shRNA Plasmid (m): sc-141589-SH, CEP104 shRNA (h) Lentiviral Particles: sc-78760-V and Cep104 shRNA (m) Lentiviral Particles: sc-141589-V.

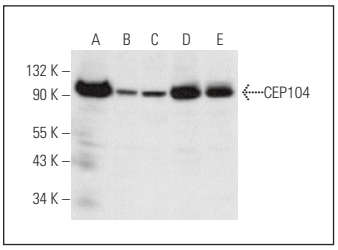
Molecular Weight of CEP104 isoforms: 104/63/27 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

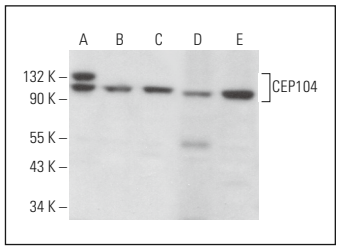
RECOMMENDED SUPPORT REAGENTS

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



CEP104 (G-11): sc-514475. Western blot analysis of CEP104 expression in MOLT-4 (**A**), SK-BR-3 (**B**), Hep G2 (**C**), K-562 (**D**) and HeLa (**E**) whole cell lysates.



CEP104 (G-11): sc-514475. Western blot analysis of CEP104 expression in SK-BR-3 (**A**), Caki-1 (**B**), NAMALWA (**C**), SP2/0 (**D**) and 3611-RF (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Frikstad, K.M., et al. 2019. A CEP104-CSPP1 complex is required for formation of primary cilia competent in hedgehog signaling. Cell Rep. 28: 1907-1922.

RESEARCH USE

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