

CENPJ (E-12): sc-166113

BACKGROUND

CENPJ (CPAP) is a centromeric protein that plays a role in brain size. The protein contains five coiled-coil domains, the most C-terminal of which includes a leucine zipper motif. CENPJ also has several potential protein phosphorylation sites and a C-terminal domain containing 21 nonamer G-box repeats. The CENPJ gene is expressed in neuroepithelium during prenatal neurogenesis, and it localizes to the spindle poles of cells undergoing mitosis. This localization suggests that a centrosomal mechanism controls neuron number in the developing mammalian brain. Mutations in the CENPJ gene have been linked to the condition autosomal recessive primary microcephaly. A novel 4 bp deletion in the gene has been characterized as a cause of protein truncation leading to the condition.

REFERENCES

- Hung, L.Y., et al. 2000. Protein 4.1 R-135 interacts with a novel centrosomal protein (CPAP) which is associated with the γ Tubulin complex. *Mol. Cell Biol.* 20: 7813-7825.
- Peng, B., et al. 2002. CPAP is a novel Stat5-interacting cofactor that augments Stat5-mediated transcriptional activity. *Mol. Endocrinol.* 16: 2019-2033.
- Triebel, F., et al. 2003. LAG-3: a regulator of T cell and DC responses and its use in therapeutic vaccination. *Trends Immunol.* 24: 619-622.
- Hung, L.Y., et al. 2004. Identification of a novel microtubule-destabilizing motif in CPAP that binds to Tubulin heterodimers and inhibits microtubule assembly. *Mol. Biol. Cell* 15: 2697-2706.

CHROMOSOMAL LOCATION

Genetic locus: CENPJ (human) mapping to 13q12.12; Cenpj (mouse) mapping to 14 C3.

SOURCE

CENPJ (E-12) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of CENPJ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CENPJ (E-12) is available conjugated to agarose (sc-166113 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166113 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166113 PE), fluorescein (sc-166113 FITC), Alexa Fluor[®] 488 (sc-166113 AF488), Alexa Fluor[®] 546 (sc-166113 AF546), Alexa Fluor[®] 594 (sc-166113 AF594) or Alexa Fluor[®] 647 (sc-166113 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166113 AF680) or Alexa Fluor[®] 790 (sc-166113 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

CENPJ (E-12) is recommended for detection of CENPJ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 CENPJ siRNA (h): sc-62090, CENPJ siRNA (m): sc-62091, CENPJ shRNA Plasmid (h): sc-62090-SH, CENPJ shRNA Plasmid (m): sc-62091-SH, CENPJ shRNA (h) Lentiviral Particles: sc-62090-V and CENPJ shRNA (m) Lentiviral Particles: sc-62091-V.

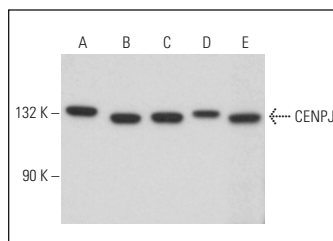
Molecular Weight of CENPJ: 150 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or Neuro-2A whole cell lysate: sc-364185.

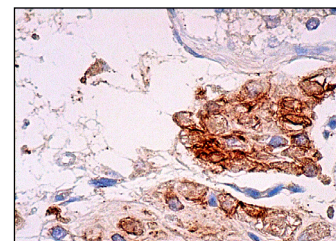
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CENPJ (E-12): sc-166113. Western blot analysis of CENPJ expression in Jurkat (A), NIH/3T3 (B), Neuro-2A (C) and IB4 (D) whole cell lysates and rat testis tissue extract (E).



CENPJ (E-12): sc-166113. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

- Chen, T.Y., et al. 2021. Septin 7 is a centrosomal protein that ensures S phase entry and microtubule nucleation by maintaining the abundance of p150^{glued}. *J. Cell. Physiol.* 236: 2706-2724.

STORAGE

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