SANTA CRUZ BIOTECHNOLOGY, INC.

CENPJ (F-20): sc-66743



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

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- 2. Peng, B., et al. 2002. CPAP is a novel Stat5-interacting cofactor that augments Stat5-mediated transcriptional activity. Mol. Endocrinol. 16: 2019-2033.
- 3. 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.
- 4. 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.
- 5. Bond, J., et al. 2005. A centrosomal mechanism involving CDK5RAP2 and CENPJ controls brain size. Nat. Genet. 37: 353-355.
- 6. Cho, J.H., et al. 2006. Depletion of CPAP by RNAi disrupts centrosome integrity and induces multipolar spindles. Biochem. Biophys. Res. Commun. 339: 742-747.
- 7. Gul, A., et al. 2006. A novel deletion mutation in CENPJ gene in a Pakistani family with autosomal recessive primary microcephaly. J. Hum. Genet. 51: 760-764.
- 8. Cox, J., et al. 2006. What primary microcephaly can tell us about brain growth. Trends Mol. Med. 12: 358-366.

CHROMOSOMAL LOCATION

Genetic locus: CENPJ (human) mapping to 13q12.12.

SOURCE

CENPJ (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CENPJ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-66743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CENPJ (F-20) is recommended for detection of CENPJ 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).

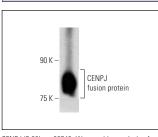
Suitable for use as control antibody for CENPJ siRNA (h): sc-62090, CENPJ shRNA Plasmid (h): sc-62090-SH and CENPJ shRNA (h) Lentiviral Particles: sc-62090-V.

Molecular Weight of CENPJ: 150 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CENPJ (F-20): sc-66743. Western blot analysis of uman recombinant CENPJ fusion protein

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.