SANTA CRUZ BIOTECHNOLOGY, INC.

Pericentrin 1 (D-4): sc-376111

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pericentrin 1 (nuclear pore complex protein Nup85) is a 656 amino acid member of the nucleoporin Nup85 family. Pericentrin 1 is an essential component of the nuclear pore complex (NPC) and is likely required for NPC assembly and maintenance. Bidirectional transport of macromolecules between the cytoplasm and nucleus occurs through NPCs embedded in the nuclear envelope. The Pericentrin 1 containing NPC subcomplex, Nup107-160, works to organize RNA export and in tethering NUP98/Nup98 and NUP153 to the nucleus. The Nup107-160 complex is likely required for spindle assembly during mitosis and for membrane clustering of CCL2-activated CCR2. Pericentrin 1 also acts as a regulator of microtubule nucleation by associating with γ-Tubulin and anchors the PKA holoenzyme at the association site. The gene encoding human Pericentrin 1 is found at chromosome 17q25.1.

CHROMOSOMAL LOCATION

Genetic locus: NUP85 (human) mapping to 17q25.1; Nup85 (mouse) mapping to 11 E2.

SOURCE

Pericentrin 1 (D-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Pericentrin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pericentrin 1 (D-4) is available conjugated to agarose (sc-376111 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376111 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376111 PE), fluorescein (sc-376111 FITC), Alexa Fluor® 488 (sc-376111 AF488), Alexa Fluor® 546 (sc-376111 AF546), Alexa Fluor® 594 (sc-376111 AF594) or Alexa Fluor® 647 (sc-376111 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376111 AF680) or Alexa Fluor® 790 (sc-376111 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Pericentrin 1 (D-4) is recommended for detection of Pericentrin 1 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 Pericentrin 1 siRNA (h): sc-106396, Pericentrin 1 siRNA (m): sc-152168, Pericentrin 1 shRNA Plasmid (h): sc-106396-SH, Pericentrin 1 shRNA Plasmid (m): sc-152168-SH, Pericentrin 1 shRNA (h) Lentiviral Particles: sc-106396-V and Pericentrin 1 shRNA (m) Lentiviral Particles: sc-152168-V.

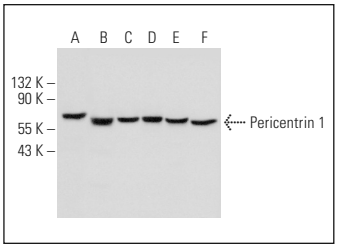
Molecular Weight of Pericentrin 1: 75 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

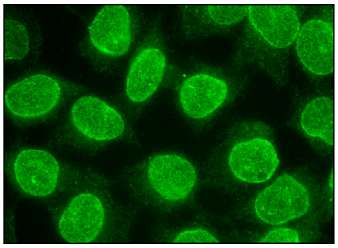
RECOMMENDED SUPPORT REAGENTS

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



Pericentrin 1 (D-4): sc-376111. Western blot analysis of Pericentrin 1 expression in MOLT-4 (**A**), Jurkat (**B**), NCI-H226 (**C**), NCI-H1299 (**D**), Hep G2 (**E**) and NIH/3T3 (**F**) whole cell lysates.



Pericentrin 1 (D-4): sc-376111. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization.

SELECT PRODUCT CITATIONS

1. Lüddecke, S., et al. 2016. The putative oncogene CEP72 inhibits the mitotic function of BRCA1 and induces chromosomal instability. Oncogene 35: 2398-2406.
2. Kane, M., et al. 2018. Nuclear pore heterogeneity influences HIV-1 infection and the antiviral activity of MX2. Elife 7: e35738.
3. Agote-Aran, A., et al. 2020. Spatial control of nucleoporin condensation by fragile X-related proteins. EMBO J. 39: e104467.
4. Zonderland, G., et al. 2022. The TRESLIN-MTBP complex couples completion of DNA replication with S/G_2 transition. Mol. Cell 82: 3350-3365.e7.
5. Ying, Z., et al. 2022. CCHCR1-astrin interaction promotes centriole duplication through recruitment of CEP72. BMC Biol. 20: 240.

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 for detailed protocols and support products.