SANTA CRUZ BIOTECHNOLOGY, INC.

CLASP1 (D-8): sc-390159

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The Power to Question

BACKGROUND

Members of the CLASP family, including CLASP1, are mammalian microtubule plus-end binding proteins that interact with CLIPs in order to stabilize the microtubule structures in transfected cells. CLASP1 localizes near the distal end of growing spindle microtubules during mitosis and is a component of the outer corona region of kinetochores. CLASP proteins stabilize microtubules by promoting pauses and restricting MT growth. Defects in CLASP1 cause collapse of the spindle, attachment of kinetochores to short microtubules, and other abnormal mitotic behaviors.

REFERENCES

1. Lemos, C.L., et al. 2000. Mast, a conserved microtubule-associated protein required for bipolar mitotic spindle organization. EMBO J. 19: 3668-3682.
2. Akhmanova, A., et al. 2001. Clasps are CLIP-115 and -170 associating proteins involved in the regional regulation of microtubule dynamics in motile fibroblasts. Cell 104: 923-935.
3. Maiato, H., et al. 2003. Human CLASP1 is an outer kinetochore component that regulates spindle microtubule dynamics. Cell 113: 891-904.
4. Maiato, H., et al. 2003. How do kinetochores CLASP dynamic microtubules? Cell Cycle 2: 511-514.
5. Mimori-Kiyosue, Y., et al. 2005. CLASP1 and CLASP2 bind to EB1 and regulate microtubule plus-end dynamics at the cell cortex. J. Cell Biol. 168: 141-153.
6. Venables, J.P., et al. 2005. Up-regulation of the ubiquitous alternative splicing factor Tra2β causes inclusion of a germ cell-specific exon. Hum. Mol. Genet. 14: 2289-2303.

CHROMOSOMAL LOCATION

Genetic locus: CLASP1 (human) mapping to 2q14.2; Clasp1 (mouse) mapping to 1 E2.3.

SOURCE

CLASP1 (D-8) is a mouse monoclonal antibody raised against amino acids 26-95 mapping near the N-terminus of CLASP1 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.

CLASP1 (D-8) is available conjugated to agarose (sc-390159 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390159 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390159 PE), fluorescein (sc-390159 FITC), Alexa Fluor® 488 (sc-390159 AF488), Alexa Fluor® 546 (sc-390159 AF546), Alexa Fluor® 594 (sc-390159 AF594) or Alexa Fluor® 647 (sc-390159 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390159 AF680) or Alexa Fluor® 790 (sc-390159 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CLASP1 (D-8) is recommended for detection of CLASP1 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).

CLASP1 (D-8) is also recommended for detection of CLASP1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CLASP1 siRNA (h): sc-44348, CLASP1 siRNA (m): sc-44352, CLASP1 shRNA Plasmid (h): sc-44348-SH, CLASP1 shRNA Plasmid (m): sc-44352-SH, CLASP1 shRNA (h) Lentiviral Particles: sc-44348-V and CLASP1 shRNA (m) Lentiviral Particles: sc-44352-V.

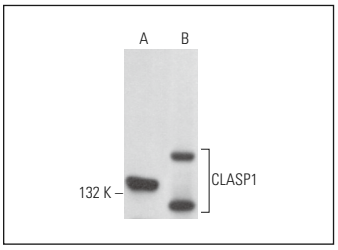
Molecular Weight of CLASP1: 150 kDa.

Positive Controls: rat brain extract: sc-2392, IMR-32 cell lysate: sc-2409 or Y79 cell lysate: sc-2240.

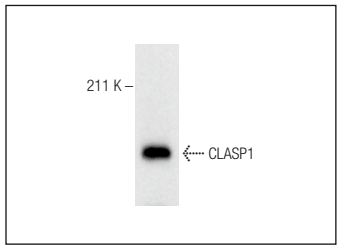
RECOMMENDED SUPPORT REAGENTS

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



CLASP1 (D-8): sc-390159. Western blot analysis of CLASP1 expression in Y79 whole cell lysate (**A**) and rat brain tissue extract (**B**).



CLASP1 (D-8): sc-390159. Western blot analysis of CLASP1 expression in IMR-32 whole cell lysate.

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.