SANTA CRUZ BIOTECHNOLOGY, INC.

CLASP2 (F-3): sc-376496

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CLASP2 (cytoplasmic linker associated protein 2), also known as KIAA0627 or hOrbit2, is a 1,294 amino acid protein that contains five HEAT repeats and localizes to the cytoplasm and the cytoskeleton, as well as to the kinetochore and the Golgi apparatus. Expressed primarily in brain tissue, CLASP2 functions as a microtubule plus-end tracking protein that regulates the stability of dynamic microtubules and is required for the proper polarization of cytoplasmic microtubule arrays in migrating cells. CLASP2 interacts with EB1, EB3, ELKS and CLIP-115 and, in addition to stabilizing microtubules, plays an important role in maintaining the stability of the kinetochore and is crucial for proper chromosomal alignment. CLASP2 is subject to phosphorylation by GSK-3β, an event that is thought to negatively regulate the ability of CLASP2 to bind to microtubules. Two isoforms of CLASP2, designated β and γ, exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: CLASP2 (human) mapping to 3p22.3; Clasp2 (mouse) mapping to 9 F3.

SOURCE

CLASP2 (F-3) is a mouse monoclonal antibody raised against amino acids 21-60 mapping near the N-terminus of CLASP2 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.

CLASP2 (F-3) is available conjugated to agarose (sc-376496 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376496 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376496 PE), fluorescein (sc-376496 FITC), Alexa Fluor® 488 (sc-376496 AF488), Alexa Fluor® 546 (sc-376496 AF546), Alexa Fluor® 594 (sc-376496 AF594) or Alexa Fluor® 647 (sc-376496 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376496 AF680) or Alexa Fluor® 790 (sc-376496 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CLASP2 (F-3) is recommended for detection of CLASP2 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), 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 CLASP2 siRNA (h): sc-78538, CLASP2 siRNA (m): sc-142361, CLASP2 shRNA Plasmid (h): sc-78538-SH, CLASP2 shRNA Plasmid (m): sc-142361-SH, CLASP2 shRNA (h) Lentiviral Particles: sc-78538-V and CLASP2 shRNA (m) Lentiviral Particles: sc-142361-V.

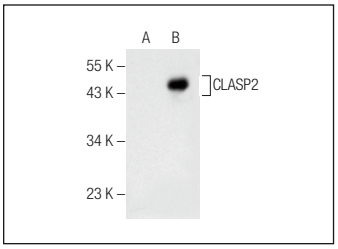
Molecular Weight of CLASP2γ: 160 kDa.

Molecular Weight of CLASP2β: 47 kDa.

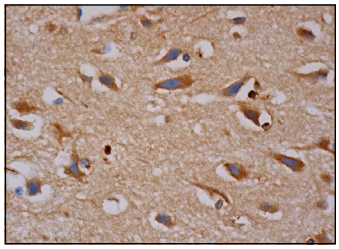
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CLASP2 (F-3): sc-376496. Western blot analysis of CLASP2 expression in non-transfected: sc-117752 (**A**) and human CLASP2 transfected: sc-114389 (**B**) 293T whole cell lysates.



CLASP2 (F-3): sc-376496. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells.

SELECT PRODUCT CITATIONS

1. Stolz, A., et al. 2015. A phenotypic screen identifies microtubule plus end assembly regulators that can function in mitotic spindle orientation. Cell Cycle 14: 827-837.
2. Li, P., et al. 2021. Doublecortin facilitates the elongation of the somatic Golgi apparatus into proximal dendrites. Mol. Biol. Cell 32: 422-434.
3. Matsuoka, R., et al. 2022. MTCL2 promotes asymmetric microtubule organization by crosslinking microtubules on the Golgi membrane. J. Cell Sci. 135: jcs259374.

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.