

CLAMP (G-3): sc-398342

BACKGROUND

CLAMP, also known as SPEF1 (sperm flagellar protein 1), is an 236 amino acid protein that is present in epididymal sperm and localizes to the cell projection, as well as to the cytoplasm. Expressed in lung, brain and testis, CLAMP functions as a microtubule-associated protein that is thought to play a role in microtubule bundling. Human CLAMP exists as two alternatively spliced isoforms and shares a high degree of homology with its mouse counterpart, suggesting a conserved role between species. The gene encoding CLAMP maps to human chromosome 20, which houses over 600 genes and comprises nearly 2% of the human genome.

REFERENCES

1. Maccioni, R.B. and Cambiasso, V. 1995. Role of microtubule-associated proteins in the control of microtubule assembly. *Physiol. Rev.* 75: 835-864.
2. Deloukas, P., et al. 2001. The DNA sequence and comparative analysis of human chromosome 20. *Nature* 414: 865-871.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610674. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Dougherty, G.W., et al. 2005. CLAMP, a novel microtubule-associated protein with EB-type calponin homology. *Cell Motil. Cytoskeleton* 62: 141-156.
5. Chan, S.W., et al. 2005. SPEF1, a conserved novel testis protein found in mouse sperm flagella. *Gene* 353: 189-199.

CHROMOSOMAL LOCATION

Genetic locus: SPEF1 (human) mapping to 20p13; Spf1 (mouse) mapping to 2 F1.

SOURCE

CLAMP (G-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-19 at the N-terminus of CLAMP of human origin.

PRODUCT

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

CLAMP (G-3) is available conjugated to agarose (sc-398342 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398342 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398342 PE), fluorescein (sc-398342 FITC), Alexa Fluor® 488 (sc-398342 AF488), Alexa Fluor® 546 (sc-398342 AF546), Alexa Fluor® 594 (sc-398342 AF594) or Alexa Fluor® 647 (sc-398342 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398342 AF680) or Alexa Fluor® 790 (sc-398342 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

CLAMP (G-3) is recommended for detection of CLAMP 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 CLAMP siRNA (h): sc-72914, CLAMP siRNA (m): sc-142360, CLAMP shRNA Plasmid (h): sc-72914-SH, CLAMP shRNA Plasmid (m): sc-142360-SH, CLAMP shRNA (h) Lentiviral Particles: sc-72914-V and CLAMP shRNA (m) Lentiviral Particles: sc-142360-V.

Molecular Weight (predicted) of CLAMP: 27 kDa.

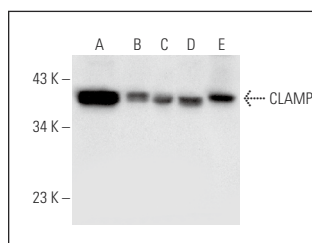
Molecular Weight (observed) of CLAMP: 40-47 kDa.

Positive Controls: human testis extract: sc-363781, Hep G2 cell lysate: sc-2227 or mouse testis extract: sc-2405.

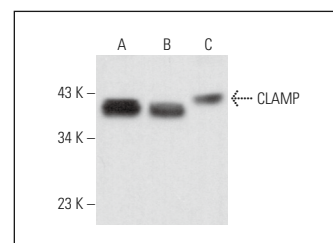
RECOMMENDED SUPPORT REAGENTS

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



CLAMP (G-3): sc-398342. Western blot analysis of CLAMP expression in Hep G2 whole cell lysate (A) and human testis (B), human brain (C), human liver (D) and mouse testis (E) tissue extracts.



CLAMP (G-3): sc-398342. Western blot analysis of CLAMP expression in Hep G2 (A) and NTERA-2 cl.D1 (B) whole cell lysates and rat lung tissue extract (C).

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.