

LASP-1 (G-7): sc-374059

BACKGROUND

LASP-1 (LIM and SH3 domain protein 1), also known as MLN50, is a 261 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains one SH3 domain, one LIM zinc-binding domain and two nebulin repeats. Expressed as two alternatively spliced isoforms, LASP-1 interacts with F-Actin and plays an important role in the regulation of Actin-associated cytoskeletal organization. LASP-1 is subject to post-translational phosphorylation, an event which may regulate Actin-related ion transport activities in epithelial cells. Overexpression of LASP-1 is associated with breast cancer, suggesting a role for LASP-1 in tumor transformation and metastasis. The gene encoding LASP-1 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Tomasetto, C., et al. 1995. LASP-1 (MLN 50) defines a new LIM protein subfamily characterized by the association of LIM and SH3 domains. *FEBS Lett.* 373: 245-249.
2. Schreiber, V., et al. 1998. Chromosomal assignment and expression pattern of the murine *Lasp1* gene. *Gene* 207: 171-175.
3. Butt, E., et al. 2003. Actin binding of human LIM and SH3 protein is regulated by cGMP- and cAMP-dependent protein kinase phosphorylation on Serine 146. *J. Biol. Chem.* 278: 15601-15607.

CHROMOSOMAL LOCATION

Genetic locus: LASP1 (human) mapping to 17q12; *Lasp1* (mouse) mapping to 11 D.

SOURCE

LASP-1 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 176-205 within an internal region of LASP-1 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.

LASP-1 (G-7) is available conjugated to agarose (sc-374059 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374059 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374059 PE), fluorescein (sc-374059 FITC), Alexa Fluor® 488 (sc-374059 AF488), Alexa Fluor® 546 (sc-374059 AF546), Alexa Fluor® 594 (sc-374059 AF594) or Alexa Fluor® 647 (sc-374059 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374059 AF680) or Alexa Fluor® 790 (sc-374059 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374059 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

LASP-1 (G-7) is recommended for detection of LASP-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), 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).

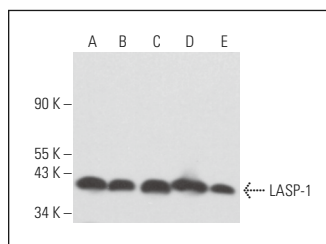
LASP-1 (G-7) is also recommended for detection of LASP-1 in additional species, including equine.

Suitable for use as control antibody for LASP-1 siRNA (h): sc-105607, LASP-1 siRNA (m): sc-105608, LASP-1 shRNA Plasmid (h): sc-105607-SH, LASP-1 shRNA Plasmid (m): sc-105608-SH, LASP-1 shRNA (h) Lentiviral Particles: sc-105607-V and LASP-1 shRNA (m) Lentiviral Particles: sc-105608-V.

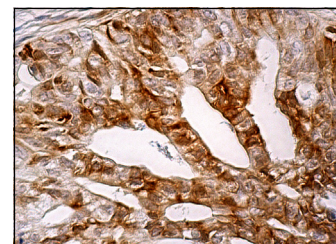
Molecular Weight of LASP-1: 40 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



LASP-1 (G-7): sc-374059. Western blot analysis of LASP-1 expression in HeLa (A), TF-1 (B), A549 (C), NIH/3T3 (D) and c4 (E) whole cell lysates.



LASP-1 (G-7): sc-374059. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Hu, S., et al. 2017. MicroRNA-326 inhibits cell proliferation and invasion, activating apoptosis in hepatocellular carcinoma by directly targeting LIM and SH3 protein 1. *Oncol. Rep.* 38: 1569-1578.
2. Huang, Z., et al. 2020. miR-133 inhibits proliferation and promotes apoptosis by targeting LASP1 in lupus nephritis. *Exp. Mol. Pathol.* 114: 104384.
3. Sidhanth, C., et al. 2022. LASP-1 interacts with ErbB2 in ovarian cancer cells. *Biochem. J.* 479: 23-38.
4. Patterson, M.R., et al. 2024. E7-mediated repression of miR-203 promotes LASP1-dependent proliferation in HPV-positive cervical cancer. *Oncogene* 43: 2184-2198.

RESEARCH USE

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

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