

Limd1 (E-10): sc-365050

BACKGROUND

The Zyxin family of proteins contains five members: Ajuba, Limd1, LPP, TRIP6 and Zyxin. Limd1 (LIM domain-containing protein 1) is an ubiquitously expressed tumor suppressor containing three LIM zinc-binding domains. LIM domains consist of a cysteine-rich consensus sequence containing two distinct zinc-binding subdomains, which mediate protein-protein interactions. Limd1 interacts with the proteins SQSTM1, Rb, p62 and TRAF6. Limd1 was first identified when the deletion of its gene was noted in some cervical cancers. Limd1 blocks *in vitro* and *in vivo* tumor growth and is down-regulated in lung cancer. Limd1 may regulate osteoclast development under stressful conditions via its interactions with TRAF6 and p62.

REFERENCES

1. Kiss, H., et al. 1999. A novel gene containing LIM domains (Limd1) is located within the common eliminated region 1 (C3CER1) in 3p21.3. *Hum. Genet.* 105: 552-559.
2. Kholodnyuk, I.D., et al. 2001. Inactivation of the human fragile histidine triad gene at 3p14.2 in monochromosomal human/mouse microcell hybrid-derived severe combined immunodeficient mouse tumors. *Cancer Res.* 60: 7119-7125.
3. Kiss, H., et al. 2001. The LZTFL1 gene is a part of a transcriptional map covering 250 kb within the common eliminated region 1 (C3CER1) in 3p21.3. *Genomics* 73: 10-19.
4. Sharp, T.V., et al. 2004. LIM domains-containing protein 1 (Limd1), a tumor suppressor encoded at chromosome 3p21.3, binds Rb and represses E2F-driven transcription. *Proc. Natl. Acad. Sci. USA* 101: 16531-16536.
5. Petit, M.M., et al. 2005. The tumor suppressor Scrib selectively interacts with specific members of the Zyxin family of proteins. *FEBS Lett.* 579: 5061-5068.
6. Petit, M.M., et al. 2005. The tumor suppressor Scrib interacts with the Zyxin-related protein LPP, which shuttles between cell adhesion sites and the nucleus. *BMC Cell Biol.* 6: 1.

CHROMOSOMAL LOCATION

Genetic locus: LIMD1 (human) mapping to 3p21.31; Limd1 (mouse) mapping to 9 F4.

SOURCE

Limd1 (E-10) is a mouse monoclonal antibody raised against amino acids 1-57 mapping at the N-terminus of Limd1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Limd1 (E-10) is recommended for detection of Limd1 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 Limd1 siRNA (h): sc-62561, Limd1 siRNA (m): sc-62562, Limd1 shRNA Plasmid (h): sc-62561-SH, Limd1 shRNA Plasmid (m): sc-62562-SH, Limd1 shRNA (h) Lentiviral Particles: sc-62561-V and Limd1 shRNA (m) Lentiviral Particles: sc-62562-V.

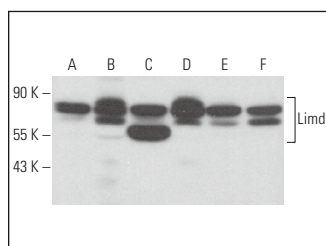
Molecular Weight of Limd1: 73 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, K-562 whole cell lysate: sc-2203 or Caki-1 cell lysate: sc-2224.

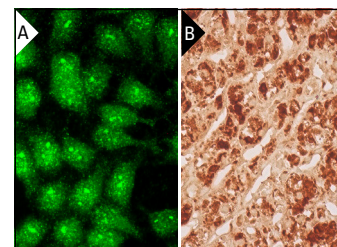
RECOMMENDED SUPPORT REAGENTS

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



Limd1 (E-10): sc-365050. Western blot analysis of Limd1 expression in K-562 (A), RAW 264.7 (B), Caki-1 (C), WEHI-231 (D), Jurkat (E) and ALL-SIL (F) whole cell lysates.



Limd1 (E-10): sc-365050. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Tang, J., et al. 2019. Silencing of Limd1 promotes proliferation and reverses cell adhesion-mediated drug resistance in non-Hodgkin's lymphoma. *Oncol. Lett.* 17: 2993-3000.

RESEARCH USE

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