

LMLN (C-14): sc-99432

BACKGROUND

LMLN, Leishmanolysin-like, is a zinc-binding peptidase belonging to the peptidase M8 family. Also known as invadolysin, LMLN is a metalloprotease found only in metazoans. LMLN activity appears to be essential for mitotic progression. LMLN has a protease activity which cleaves lamin *in vitro*. LMLN mutations will allow increased levels of nuclear envelope proteins, monopolar and asymmetric spindles, and chromosomes that appear hypercondensed in length with a surrounding halo of loosely condensed chromatin. LMLN proteins are found on cytoplasmic ring structures that are similar to invadopodia. These structures are generally associated with high levels of proteolysis and cell signaling and are frequently seen in metastatic cancer cells that are invading surrounding tissues. LMLN is relocalized from the cytoplasm to the leading edge of cells upon migration. Mutations of LMLN can have a dramatic impact on the directed migrations of germ cells. LMLN has significant similarities with Leishmanolysin produced by trypanosomes such as *Leishmania*. This conserved nature could likely direct research in mitigating spread of trypanosome organisms.

REFERENCES

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2. Brittingham, A., et al. 1999. Interaction of *Leishmania* gp63 with cellular receptors for fibronectin. *Infect. Immun.* 67: 4477-4484.
3. Ilgoutz, S.C., et al. 2001. Function and assembly of the *Leishmania* surface coat. *Int. J. Parasitol.* 31: 899-908.
4. McHugh, B., et al. 2004. Invadolysin: a novel, conserved metalloprotease links mitotic structural rearrangements with cell migration. *J. Cell Biol.* 167: 673-686.
5. Santos, A.L., et al. 2006. The ubiquitous gp63-like metalloprotease from lower trypanosomatids: in the search for a function. *An. Acad. Bras. Cienc.* 78: 687-714.
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7. Lieke, T., et al. 2008. *Leishmania* surface protein gp63 binds directly to human natural killer cells and inhibits proliferation. *Clin. Exp. Immunol.* 153: 221-230.
8. Matteoli, F.P., et al. 2008. Roles of the endosymbiont and leishmanolysin-like molecules expressed by *Crithidia deanei* in the interaction with mammalian fibroblasts. *Exp. Parasitol.* 121: 246-253.

CHROMOSOMAL LOCATION

Genetic locus: LMLN (human) mapping to 3q29; Lmln (mouse) mapping to 16 B3.

SOURCE

LMLN (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LMLN of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99432 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LMLN (C-14) is recommended for detection of Leishmanolysin-like peptidase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

LMLN (C-14) is also recommended for detection of Leishmanolysin-like peptidase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LMLN siRNA (h): sc-78012, Lmln siRNA (m): sc-146768, LMLN shRNA Plasmid (h): sc-78012-SH, Lmln shRNA Plasmid (m): sc-146768-SH, LMLN shRNA (h) Lentiviral Particles: sc-78012-V and Lmln shRNA (m) Lentiviral Particles: sc-146768-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.