



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# LmIn siRNA (m): sc-146768

## BACKGROUND

LmIn, leishmanolysin-like, is a zinc-binding peptidase belonging to the peptidase M8 family. Also known as invadolysin, LmIn is a metalloprotease found only in metazoans. LmIn activity appears to be essential for mitotic progression. LmIn has a protease activity which cleaves lamin *in vitro*. LmIn 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. LmIn 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. LmIn is relocated from the cytoplasm to the leading edge of cells upon migration. Mutations of LmIn can have a dramatic impact on the directed migrations of germ cells. LmIn 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

1. El-Sayed, N.M. and Donelson, J.E. 1997. African trypanosomes have differentially expressed genes encoding homologues of the *Leishmania* GP63 surface protease. *J. Biol. Chem.* 272: 26742-26748.
2. Brittingham, A., Chen, G., McGwire, B.S., Chang, K.P. and Mosser, D.M. 1999. Interaction of *Leishmania* gp63 with cellular receptors for fibronectin. *Infect. Immun.* 67: 4477-4484.
3. Ilgoutz, S.C. and McConville, M.J. 2001. Function and assembly of the *Leishmania* surface coat. *Int. J. Parasitol.* 31: 899-908.
4. McHugh, B., Krause, S.A., Yu, B., Deans, A.M., Heasman, S., McLaughlin, P. and Heck, M.M. 2004. Invadolysin: a novel, conserved metalloprotease links mitotic structural rearrangements with cell migration. *J. Cell Biol.* 167: 673-686.
5. Santos, A.L., Branquinho, M.H. and D'Avila-Levy, C.M. 2006. The ubiquitous gp63-like metalloprotease from lower trypanosomatids: in the search for a function. *An. Acad. Bras. Cienc.* 78: 687-714.
6. Santos, A.L., d'Avila-Levy, C.M., Elias, C.G., Vermelho, A.B. and Branquinho, M.H. 2007. *Phytomonas* *serpens*: immunological similarities with the human trypanosomatid pathogens. *Microbes Infect.* 9: 915-921.
7. Lieke, T., Nylen, S., Eidsmo, L., McMaster, W.R., Mohammadi, A.M., Khamesipour, A., Berg, L. and Akuffo, H. 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., d'Avila-Levy, C.M., Santos, L.O., Barbosa, G.M., Holandino, C., Branquinho, M.H. and Santos, A.L. 2009. Roles of the endosymbiont and leishmanolysin-like molecules expressed by *Crithidia deanei* in the interaction with mammalian fibroblasts. *Exp. Parasitol.* 121: 246-253.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: LmIn (mouse) mapping to 16 B3.

## PRODUCT

LmIn siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LmIn shRNA Plasmid (m): sc-146768-SH and LmIn shRNA (m) Lentiviral Particles: sc-146768-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

LmIn siRNA (m) is recommended for the inhibition of LmIn expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LmIn gene expression knockdown using RT-PCR Primer: LmIn (m)-PR: sc-146768-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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