



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## Limitin siRNA (m): sc-45377

### BACKGROUND

Limitin, an IFN-like molecule also known as IFN- $\zeta$ , has weak sequence homology to IFN- $\alpha$ , IFN- $\beta$  and IFN- $\omega$  and acts through the same IFN- $\alpha/\beta$  receptors. While Limitin has antiproliferative, immunomodulatory and antiviral effects similar to IFN- $\alpha$  and IFN- $\beta$ , it lacks influence on myeloid and erythroid progenitors. Limitin binds to IFN- $\alpha/\beta$  receptors and induces IFN regulatory factor-1, indicating that Limitin constitutes a new prototype of the type I IFN family with an ability to arrest the growth of or kill lympho-hematopoietic cells. Strong immunomodulatory, antitumor and antiviral effects with weak myelosuppressive and weak acute toxic effects of Limitin indicate that it may be useful as a new therapeutic drug for virus-hepatitis and cancers.

### REFERENCES

- Oritani, K., Kincade, P.W., Zhang, C., Tomiyama, Y. and Matsuzawa, Y. 2001. Type I interferons and Limitin: a comparison of structures, receptors, and functions. *Cytokine Growth Factor Rev.* 12: 337-348.
- Takahashi, I., Kosaka, H., Oritani, K., Heath, W.R., Ishikawa, J., Okajima, Y., Ogawa, M., Kawamoto, S., Yamada, M., Azukizawa, H., Itami, S., Yoshikawa, K., Tomiyama, Y. and Matsuzawa Y. 2001. A new IFN-like cytokine, Limitin, modulates the immune response without influencing thymocyte development. *J. Immunol.* 167: 3156-3163.
- Kawamoto, S., Oritani, K., Asakura, E., Ishikawa, J., Koyama, M., Miyano, K., Iwamoto, M., Yasuda, S., Nakakubo, H., Hirayama, F., Ishida, N., Ujiie, H., Masaie, H. and Tomiyama Y. 2004. A new interferon, Limitin, displays equivalent immunomodulatory and antitumor activities without myelosuppressive properties as compared with IFN- $\alpha$ . *Exp. Hematol.* 32: 797-805.
- Oritani, K. and Tomiyama, Y. 2004. Interferon- $\zeta$ /Limitin: novel type I interferon that displays a narrow range of biological activity. *Int. J. Hematol.* 80: 325-331.
- Oritani, K. and Kanakura, Y. 2005. IFN- $\zeta$ /Limitin: a member of type I IFN with mild lympho-myelosuppression. *J. Cell. Mol. Med.* 9: 244-254.

### CHROMOSOMAL LOCATION

Genetic locus: Ifnz (mouse) mapping to 4 C4.

### PRODUCT

Limitin siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs 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 Limitin shRNA Plasmid (m): sc-45377-SH and Limitin shRNA (m) Lentiviral Particles: sc-45377-V as alternate gene silencing products.

For independent verification of Limitin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45377A, sc-45377B and sc-45377C.

### PROTOCOLS

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

Limitin siRNA (m) is recommended for the inhibition of Limitin 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 Limitin gene expression knockdown using RT-PCR Primer: Limitin (m)-PR: sc-45377-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.