



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## I $\kappa$ B- $\zeta$ siRNA (m): sc-44897

### BACKGROUND

I $\kappa$ B- $\zeta$  (also called MAIL-S or INAP) is a member of the I $\kappa$ B family. It shares a 30% identity with other family members and consists of six ankyrin repeats at its C-terminal. I $\kappa$ B- $\zeta$  accumulates in the nucleus and, in humans, associates with the p50 and p65 subunits of nuclear NF $\kappa$ B via its ankyrin repeats. The mouse homologue of I $\kappa$ B- $\zeta$  has only been shown to associate with the p50 subunit. I $\kappa$ B- $\zeta$  inhibits DNA binding and activity of the transcription factor NF $\kappa$ B. Distinct from other I $\kappa$ B family members, I $\kappa$ B- $\zeta$  is not degraded upon cell stimulation and activation of NF $\kappa$ B, rather evidence shows that it is up-regulated under these circumstances. This suggests that I $\kappa$ B- $\zeta$  plays a significant role in regulation of NF $\kappa$ B and that NF $\kappa$ B may regulate I $\kappa$ B- $\zeta$  in a negative feedback loop. Regulation of NF $\kappa$ B by I $\kappa$ B- $\zeta$  may differ depending on the species.

### REFERENCES

1. Yamazaki, S., et al. 2001. A novel I $\kappa$ B protein, I $\kappa$ B- $\zeta$ , induced by proinflammatory stimuli, negatively regulates NF $\kappa$ B in the nuclei. *J. Biol. Chem.* 276: 27657-27662.
2. Muta, T., et al. 2003. I $\kappa$ B- $\zeta$ , a new anti-inflammatory nuclear protein induced by lipopolysaccharide, is a negative regulator for NF $\kappa$ B. *J. Endotoxin Res.* 9: 187-191.
3. Shiina, T. et al. 2004. Targeted disruption of MAIL, a nuclear I $\kappa$ B protein, leads to severe atopic dermatitis-like disease. *J. Biol. Chem.* 279: 55493-55498.
4. Kusaka, M. et al. 2005. Gene expression profile in rat renal isografts from brain dead donors. *Transplant. Proc.* 37: 364-366.
5. Yamazaki, S., et al. 2005. Stimulus-specific induction of a novel NF $\kappa$ B regulator, I $\kappa$ B- $\zeta$ , via Toll/Interleukin-1 receptor is mediated by mRNA stabilization. *J. Biol. Chem.* 280: 1678-1687.
6. Motoyama, M., et al. 2005. Positive and negative regulation of NF $\kappa$ B-mediated transcription by I $\kappa$ B- $\zeta$ , an inducible nuclear protein. *J. Biol. Chem.* 280: 7444-7451.

### CHROMOSOMAL LOCATION

Genetic locus: Nfkbiz (mouse) mapping to 16 C1.1.

### PRODUCT

I $\kappa$ B- $\zeta$  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 I $\kappa$ B- $\zeta$  shRNA Plasmid (m): sc-44897-SH and I $\kappa$ B- $\zeta$  shRNA (m) Lentiviral Particles: sc-44897-V as alternate gene silencing products.

For independent verification of I $\kappa$ B- $\zeta$  (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-44897A, sc-44897B and sc-44897C.

### RESEARCH USE

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

### 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

I $\kappa$ B- $\zeta$  siRNA (m) is recommended for the inhibition of I $\kappa$ B- $\zeta$  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 I $\kappa$ B- $\zeta$  gene expression knockdown using RT-PCR Primer: I $\kappa$ B- $\zeta$  (m)-PR: sc-44897-PR (20  $\mu$ l, 502 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### PROTOCOLS

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