

I κ B- ζ (C-15): sc-33421

BACKGROUND

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

REFERENCES

1. Yamazaki, S. et al. 2001. A novel I κ B protein, I κ B- ζ , induced by proinflammatory stimuli, negatively regulates NF κ B in the nuclei. *J. Biol. Chem.* 276: 27657-27662.
2. Eto, A. et al. 2003. Essential roles for NF κ B and a Toll/IL-1 receptor domain-specific signal(s) in the induction of I κ B- ζ . *Biochem. Biophys. Res. Commun.* 301: 495-501.
3. Muta, T. et al. 2003. I κ B- ζ , a new anti-inflammatory nuclear protein induced by lipopolysaccharide, is a negative regulator for NF κ B. *J. Endotoxin. Res.* 9: 187-191.
4. Yamazaki, S. et al. 2005. Stimulus-specific induction of a novel NF κ B regulator, I κ B- ζ , via Toll/Interleukin-1 receptor is mediated by mRNA stabilization. *J. Biol. Chem.* 280: 1678-1687.
5. Motoyama, M. et al. 2005. Positive and negative regulation of NF κ B-mediated transcription by I κ B- ζ , an inducible nuclear protein. *J. Biol. Chem.* 280: 7444-7451.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIZ (human) mapping to 3q12.3; Nfkbiz (mouse) mapping to 16 C1.1.

SOURCE

I κ B- ζ (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of I κ B- ζ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-33421 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

I κ B- ζ (C-15) is recommended for detection of I κ B- ζ 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).

I κ B- ζ (C-15) is also recommended for detection of I κ B- ζ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for I κ B- ζ siRNA (h): sc-44896, I κ B- ζ siRNA (m): sc-44897, I κ B- ζ shRNA Plasmid (h): sc-44896-SH, I κ B- ζ shRNA Plasmid (m): sc-44897-SH, I κ B- ζ shRNA (h) Lentiviral Particles: sc-44896-V and I κ B- ζ shRNA (m) Lentiviral Particles: sc-44897-V.

Positive Controls: HeLa nuclear extract: sc-2120.

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.

SELECT PRODUCT CITATIONS

1. Okamoto, K., et al. 2010. I κ B ζ regulates T(H)17 development by cooperating with ROR nuclear receptors. *Nature* 464: 1381-1385.

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.