

IkB-ε (21): sc-135945

BACKGROUND

On the basis of both functional and structural considerations, members of the IkB family of proteins can be divided into four groups. The first of these groups, IkB-α, includes the avian protein pp40 and the mammalian MAD-3, both of which inhibit binding of p50-p65 NFκB complex or Rel protein to their cognate binding sites but do not inhibit the binding of p50 homodimer to κB sites, suggesting that the IkB-α family binds to the p65 subunit of p50-p65 heterocomplex through ankyrin repeats. The second member of the IkB family is represented by a protein designated IkB-β. The third group of IkB proteins is represented by IkB-γ, which is identical in sequence with the C-terminal domain of the p110 precursor of NFκB p50 and expressed predominantly in lymphoid cells. An additional IkB family member has been identified as IkB-ε, has several phosphorylated forms and is primarily found complexed with RelA and/or c-Rel.

REFERENCES

1. Ghosh, S., et al. 1990. Activation *in vitro* to NFκB by phosphorylation of its inhibitor IkB. *Nature* 344: 678-682.
2. Kerr, L.D., et al. 1991. The Rel-associated pp40 protein prevents DNA binding of Rel and NFκB: relationship with IkB-β and regulation by phosphorylation. *Genes Dev.* 5: 1464-1476.
3. Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. *Science* 253: 1268-1271.
4. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes IkB-like activity. *Cell* 65: 1281-1289.
5. Inoue, J., et al. 1992. IkB-γ, a 70 kd protein identical to the C-terminal half of p110 NFκB; a new member of the IkB family. *Cell* 68: 1109-1120.
6. Thompson, J.E., et al. 1995. IkB-β regulates the persistent response in biphasic activation of NFκB. *Cell* 80: 573-582.
7. Whiteside, S.T., et al. 1997. IkB-ε, a novel member of the IkB family, controls RelA and cRel NFκB activity. *EMBO J.* 16: 1413-1426.
8. Simeonidis, S., et al. 1997. Cloning and functional characterization of mouse IkB-ε. *Proc. Natl. Acad. Sci. USA* 94: 14372-14377.
9. Lopez-Bojorquez, L.N., et al. 2004. NFκB translocation and endothelial cell activation is potentiated by macrophage-released signals co-secreted with TNF-α and IL-1β. *Inflamm. Res.* 53: 567-575.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIE (human) mapping to 6p21.1; Nfkbie (mouse) mapping to 17 B3.

SOURCE

IkB-ε (21) is a mouse monoclonal antibody raised against amino acids 200-211 of IkB-ε of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

APPLICATIONS

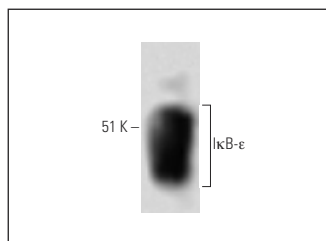
IkB-ε (21) is recommended for detection of IkB-ε of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IkB-ε siRNA (h): sc-35642, IkB-ε siRNA (m): sc-35643, IkB-ε shRNA Plasmid (h): sc-35642-SH, IkB-ε shRNA Plasmid (m): sc-35643-SH, IkB-ε shRNA (h) Lentiviral Particles: sc-35642-V and IkB-ε shRNA (m) Lentiviral Particles: sc-35643-V.

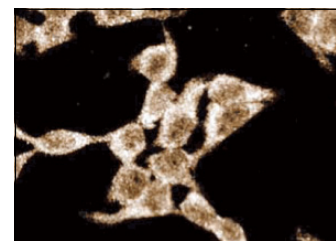
Molecular Weight of IkB-ε: 51 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or WEHI-231 whole cell lysate: sc-2213.

DATA



IkB-ε (21): sc-135945. Western blot analysis of IkB-ε expression in A-431 whole cell lysate.



IkB-ε (21): sc-135945. Immunofluorescence staining of HeLa cells showing cytoplasmic staining.

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. Not for resale.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.