SANTA CRUZ BIOTECHNOLOGY, INC.

IκB-β (G-6): sc-74453

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The Power to Question

BACKGROUND

On the basis of both functional and structural considerations, members of the IκB family of proteins can be divided into four groups. The first of these groups, IκB-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 IκB-α family binds to the p65 subunit of p50-p65 heterocomplex through ankyrin repeats. The second member of the IκB family is represented by a protein designated IκB-β. The third group of IκB proteins is represented by IκB-γ, which is identical in sequence with the C-terminal domain of the p110 precursor of NFκB p50 and is expressed predominantly in lymphoid cells. An additional IκB family member, IκB-ε, has several phosphorylated forms and is primarily found complexed with Rel A and/or c-Rel.

REFERENCES

1. Ghosh, S., et al. 1990. Activation *in vitro* to NFκB by phosphorylation of its inhibitor IκB. 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 IκB-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 252: 1268-1271.
4. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes IκB-like activity. Cell 65: 1281-1289.
5. Inoue, J.I., et al. 1992. IκB-γ, a 70 kDa protein identical to the C-terminal half of p110 NFκB; a new member of the IκB family. Cell 68: 1109-1120.
6. Thompson, J.E., et al. 1995. IκB-β regulates the persistent response in biphasic activation of NFκB. Cell 80: 573-582.
7. Whiteside, S.T., et al. 1997. IκB-ε, a novel member of the IκB family, controls Rel A and c-Rel NFκB activity. EMBO J. 16: 1413-1426.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIB (human) mapping to 19q13.2; Nfkbib (mouse) mapping to 7 A3.

SOURCE

IκB-β (G-6) is a mouse monoclonal antibody raised against amino acids 1-359 representing full length IκB-β of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-74453 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

IκB-β (G-6) is recommended for detection of IκB-β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for IκB-β siRNA (h): sc-29362, IκB-β siRNA (m): sc-35623, IκB-β shRNA Plasmid (h): sc-29362-SH, IκB-β shRNA Plasmid (m): sc-35623-SH, IκB-β shRNA (h) Lentiviral Particles: sc-29362-V and IκB-β shRNA (m) Lentiviral Particles: sc-35623-V.

IκB-β (G-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

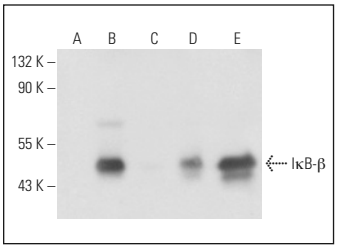
Molecular Weight of IκB-β: 45 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242, WEHI-3 cell lysate: sc-3815 or KNRK whole cell lysate: sc-2214.

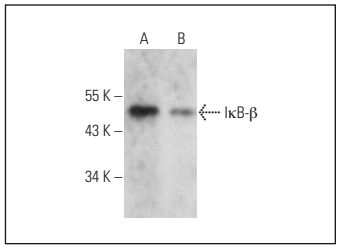
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IκB-β (G-6): sc-74453. Western blot analysis of IκB-β expression in Ramos (**A**), CTLL-2 (**B**), RAW 264.7 (**C**), WEHI-3 (**D**) and KNRK (**E**) whole cell lysates.



IκB-β (G-6): sc-74453. Western blot analysis of IκB-β expression in NIH/3T3 (**A**) and PC-12 (**B**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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