SANTA CRUZ BIOTECHNOLOGY, INC.

IκB-β (D-3): sc-74451

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. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes IκB-like activity. Cell 65: 1281-1289.

CHROMOSOMAL LOCATION

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

SOURCE

IκB-β (D-3) 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_{2a} 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-74451 X, 200 µg/0.1 ml.

IκB-β (D-3) is available conjugated to agarose (sc-74451 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74451 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74451 PE), fluorescein (sc-74451 FITC), Alexa Fluor® 488 (sc-74451 AF488), Alexa Fluor® 546 (sc-74451 AF546), Alexa Fluor® 594 (sc-74451 AF594) or Alexa Fluor® 647 (sc-74451 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74451 AF680) or Alexa Fluor® 790 (sc-74451 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

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 (D-3) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

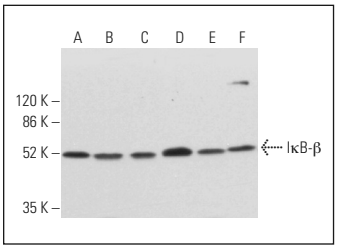
Suitable for use as control antibody for IκB-β siRNA (h): sc-29362, IκB-β siRNA (m): sc-35623, IκB-β shRNA Plasmid (h): sc-29362-SH, IκB-β shRNA Plasmid (m): sc-35623-SH, IκB-β shRNA (h) Lentiviral Particles: sc-29362-V and IκB-β shRNA (m) Lentiviral Particles: sc-35623-V.

IκB-β (D-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

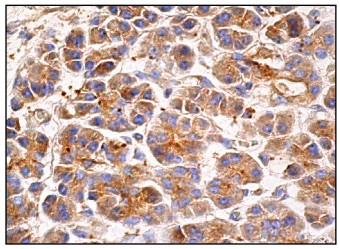
Molecular Weight of IκB-β: 45 kDa.

Positive Controls: Ramos cell lysate: sc-2216, CTLL-2 cell lysate: sc-2242 or F9 cell lysate: sc-2245.

DATA



IκB-β (D-3): sc-74451. Western blot analysis of IκB-β expression in Ramos (**A**), CTLL-2 (**B**), RAW 264.7 (**C**), F9 (**D**), SP2/0 (**E**) and 3T3-L1 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



IκB-β (D-3): sc-74451. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Lv, L., et al. 2011. Luteolin prevents LPS-induced TNF-α expression in cardiac myocytes through inhibiting NFκB signaling pathway. Inflammation 34: 620-629.
2. Xu, Y.J., et al. 2019. Epstein-Barr virus-coded miR-BART13 promotes nasopharyngeal carcinoma cell growth and metastasis via targeting of the NKIRAS2/NFκB pathway. Cancer Lett. 447: 33-40.
3. Pereira, B.L.B., et al. 2020. *Spondias mombin L.* attenuates ventricular remodelling after myocardial infarction associated with oxidative stress and inflammatory modulation. J. Cell. Mol. Med. 24: 7862-7872.
4. Liu, M., et al. 2022. Combination of *Sophora flavescens* alkaloids and *Panax quinquefolium* saponins modulates different stages of experimental autoimmune myocarditis via the NFκB and TGF-β1 pathways. Exp. Ther. Med. 24: 570.

RESEARCH USE

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