SANTA CRUZ BIOTECHNOLOGY, INC.

IκB-β (C-20): sc-945

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.

CHROMOSOMAL LOCATION

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

SOURCE

IκB-β (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IκB-β of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-945 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-945 AC, 500 µg/0.25 ml agarose in 1 ml; as fluorescein (sc-945 FITC) or rhodamine (sc-945 TRITC) conjugates for use in immunofluorescence, 200 µg/1 ml; and as Alexa Fluor® 405 (sc-945 AF405), Alexa Fluor® 488 (sc-945 AF488) or Alexa Fluor® 647 (sc-945 AF647) conjugates for cytometry flow or immunofluorescence; 100 µg/2 ml.

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APPLICATIONS

IκB-β (C-20) is recommended for detection of IκB-β 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)], 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.

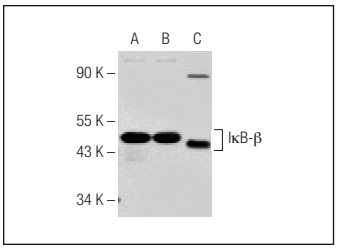
Molecular Weight of IκB-β: 45 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, WEHI-3 cell lysate: sc-3815 or KNRK whole cell lysate: sc-2214.

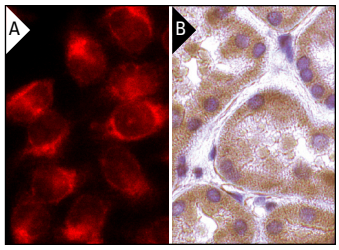
STORAGE

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

DATA



IκB-β (C-20): sc-945. Western blot analysis of IκB-β expression in Raw 264.7 (**A**), WEHI-231 (**B**) and Ramos (**C**) whole cell lysates.



IκB-β (C-20): sc-945. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Chu, Z.L., et al. 1996. Basal phosphorylation of the PEST domain in the IκB-β regulates its functional interaction with the c-Rel proto-oncogene product. Mol. Cell. Biol. 16: 5974-5984.
2. Friedrichsen, M., et al. 2010. Dissociation between skeletal muscle inhibitor-κB kinase/nuclear factor-κB pathway activity and Insulin sensitivity in nondiabetic twins. J. Clin. Endocrinol. Metab. 95: 414-421.
3. Yang, J.Q., et al. 2010. NBR1 is a new PB1 signalling adapter in Th2 differentiation and allergic airway inflammation *in vivo*. EMBO J. 29: 3421-3433.
4. Treiber, M., et al. 2011. Myeloid, but not pancreatic, RelA/p65 is required for fibrosis in a mouse model of chronic pancreatitis. Gastroenterology 141: 1473-1485.
5. Valovka, T. and Hottiger, M.O. 2011. p65 controls NFκB activity by regulating cellular localization of IκB-β. Biochem. J. 434: 253-263.
6. Bryant, K.J., et al. 2011. A bifunctional role for group IIA secreted phospholipase A_2 in human rheumatoid fibroblast-like synoviocyte arachidonic acid metabolism. J. Biol. Chem. 286: 2492-2503.
7. Cuadrado, I., et al. 2012. Labdanolic acid methyl ester (LAME) exerts anti-inflammatory effects through inhibition of TAK-1 activation. Toxicol. Appl. Pharmacol. 258: 109-117.

RESEARCH USE

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