SANTA CRUZ BIOTECHNOLOGY, INC.

p-IκB-α (B-9): sc-8404

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, identical in sequence with the C-terminal domain of the p110 precursor of NFκB p50 and expressed predominantly in lymphoid cells. An additional IκB family member has been identified as IκB-ε, which has several phosphorylated forms and is primarily found complexed with Rel A and/or c-Rel.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIA (human) mapping to 14q13.2; Nfkbia (mouse) mapping to 12 C1.

SOURCE

p-IκB-α (B-9) is a mouse monoclonal antibody raised against Ser 32 phosphorylated IκB-α of human 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.

p-IκB-α (B-9) is available conjugated to agarose (sc-8404 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8404 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8404 PE), fluorescein (sc-8404 FITC), Alexa Fluor® 488 (sc-8404 AF488), Alexa Fluor® 546 (sc-8404 AF546), Alexa Fluor® 594 (sc-8404 AF594) or Alexa Fluor® 647 (sc-8404 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8404 AF680) or Alexa Fluor® 790 (sc-8404 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-8404 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

APPLICATIONS

p-IκB-α (B-9) is recommended for detection of Ser 32 phosphorylated IκB-α 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

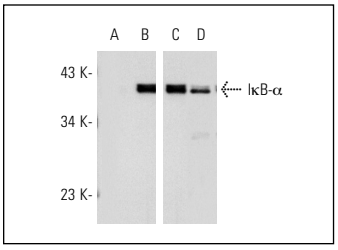
Suitable for use as control antibody for IκB-α siRNA (h): sc-29360, IκB-α siRNA (m): sc-29361, IκB-α shRNA Plasmid (h): sc-29360-SH, IκB-α shRNA Plasmid (m): sc-29361-SH, IκB-α shRNA (h) Lentiviral Particles: sc-29360-V and IκB-α shRNA (m) Lentiviral Particles: sc-29361-V.

Molecular Weight of p-IκB-α: 41 kDa.

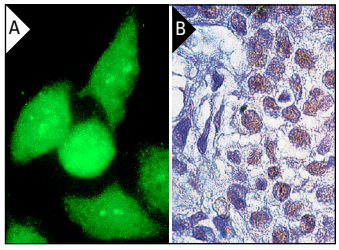
STORAGE

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

DATA



Western blot analysis of IκB-α activation in untreated (**A**,**C**) and TNFα-induced (**B**,**D**) HeLa cells. Antibodies tested include a phospho-specific IκB-α monoclonal, p-IκB-α (B-9): sc-8404 (**A**,**B**) and a control antibody, IκB-α (H-4): sc-1643 (**C**,**D**).



p-IκB-α (B-9): sc-8404. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma showing nuclear localization of activated IκB-α (**A**). Immunofluorescence staining of methanol-fixed, TNFα-treated HeLa cells, showing nuclear localization of activated IκB-α (**B**).

SELECT PRODUCT CITATIONS

1. Shao, J., et al. 2000. Overexpression of the wild-type p53 gene inhibits NFκB activity and synergizes with aspirin to induce apoptosis in human colon cancer cells. Oncogene 19: 726-736.
2. Tu, Q., et al. 2016. Peroxiredoxin 6 attenuates ischemia- and hypoxia-induced liver damage of brain-dead donors. Mol. Med. Rep. 13: 753-761.
3. Wu, J., et al. 2016. Ginsenoside Rg1 exerts a protective effect against $Aβ_{25-35}$-induced toxicity in primary cultured rat cortical neurons through the NFκB/NO pathway. Int. J. Mol. Med. 37: 781-788.
4. Feng, T., et al. 2017. Hepatocyte-specific Smad7 deletion accelerates DEN-induced HCC via activation of STAT3 signaling in mice. Oncogenesis 6: e294.
5. Kim, Y.E., et al. 2017. Inhibitory effect of punicalagin on lipopolysaccharide-induced neuroinflammation, oxidative stress and memory impairment via inhibition of nuclear factor-κB. Neuropharmacology 117: 21-32.
6. da Silva Franco, N., et al. 2017. Propranolol treatment lowers blood pressure, reduces vascular inflammatory markers and improves endothelial function in obese mice. Pharmacol. Res. 122: 35-45.
7. Lou, Y., et al. 2017. Estradiol suppresses TLR4-triggered apoptosis of decidual stromal cells and drives an anti-inflammatory TH2 shift by activating SGK1. Int. J. Biol. Sci. 13: 434-448.
8. Choi, Y.Y., et al. 2017. Immunomodulatory effects of *Pseudostellaria heterophylla* (Miquel) Pax on regulation of Th1/Th2 levels in mice with atopic dermatitis. Mol. Med. Rep. 15: 649-656.
9. Jeong Nam, Y., et al. 2017. KATP channel block inhibits the Toll-like receptor 2-mediated stimulation of NFκB by suppressing the activation of Akt, mTOR, JNK and p38-MAPK. Eur. J. Pharmacol. 815: 190-201.

RESEARCH USE

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