SANTA CRUZ BIOTECHNOLOGY, INC.

p-IκB-α (Ser 32): sc-7977

SANTA CRUZ BIOTECHNOLOGY

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, a protein 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, a protein which has several phosphorylated forms and is primarily found complexed with RelA and/or c-Rel.

CHROMOSOMAL LOCATION

Genetic locus: NFKBIA (human) mapping to 14q13; Nfkbia (mouse) mapping to 12 C1-C3.

SOURCE

p-IκB-α (Ser 32) is available as either goat (sc-7977) or rabbit (sc-7977-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 32 phosphorylated IκB-α of human 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-7977 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-IκB-α (Ser 32) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HeLa + TNFα cell lysate: sc-2228.

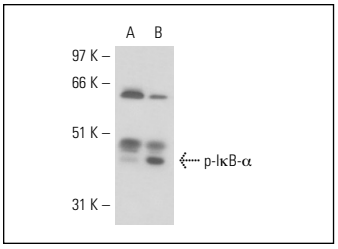
STORAGE

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.

DATA



p-IκB-α (Ser 32): sc-7977-R. Western blot analysis of phosphorylated-IκB-α expression in Jurkat (**A**) and TNFα /ALLN-treated Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shishodia, S., et al. 2004. Cyclooxygenase (COX)-2 inhibitor celecoxib abrogates activation of cigarette smoke-induced nuclear factor (NF)κB by suppressing activation of IκBα kinase in human non-small cell lung carcinoma: correlation with suppression of cyclin D1, COX-2, and matrix metalloproteinase-9. Cancer Res. 64: 5004-5012.
2. Kakazu, A., et al. 2004. HGF protects corneal epithelial cells from apoptosis by the PI-3K/Akt-1/Bad- but not the ERK1/2-mediated signaling pathway. Invest. Ophthalmol. Vis. Sci. 45: 3485-3492.
3. Alonso, F., et al. 2010. An angiotensin II- and NFκB-dependent mechanism increases connexin 43 in murine arteries targeted by renin-dependent hypertension. Cardiovasc. Res. 87: 166-176.
4. Ricciotti, E., et al. 2010. NCX 4040, a nitric oxide-donating aspirin, exerts anti-inflammatory effects through inhibition of IκB-α degradation in human monocytes. J. Immunol. 184: 2140-2147.
5. Tsou, T.C., et al. 2010. Zinc oxide particles induce inflammatory responses in vascular endothelial cells via NFκB signaling. J. Hazard. Mater. 183: 182-188.
6. Giannoni, E., et al. 2011. Estradiol and progesterone strongly inhibit the innate immune response of mononuclear cells in newborns. Infect. Immun. 79: 2690-2698.
7. Tang, G.J., et al. 2011. Novel role of AMP-activated protein kinase signaling in cigarette smoke induction of IL-8 in human lung epithelial cells and lung inflammation in mice. Free Radic. Biol. Med. 50: 1492-1502.