

# p-IκB-α (B-9): sc-8404



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, 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<sub>2b</sub> 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).

## APPLICATIONS

p-IκB-α (B-9) is recommended for detection of IκB-α phosphorylated at Ser 32 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).

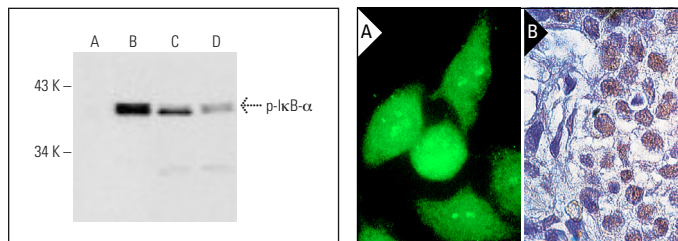
Suitable for use as control antibody for IκB-α siRNA (h): sc-29360, IκB-α siRNA (m): sc-29361, IκB-α shRNA Plasmid (h): sc-29360-SH, IκB-α shRNA Plasmid (m): sc-29361-SH, IκB-α shRNA (h) Lentiviral Particles: sc-29360-V and IκB-α shRNA (m) Lentiviral Particles: sc-29361-V.

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 phosphorylation in untreated (A, C) and TNF-α induced (B, D) HeLa cells. Antibodies tested include p-IκB-α (B-9): sc-8404 (A, B) and 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

- 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.
- Wang, H.C. and Lee, W.S. 2014. Progesterone-induced migration inhibition in male rat aortic smooth muscle cells through the cSrc/AKT/ERK 2/p38 pathway-mediated up-regulation of p27. *Endocrinology* 155: 1428-1435.
- Shukla, S., et al. 2015. Suppression of NFκB and NFκB-regulated gene expression by apigenin through IκBα and IKK pathway in TRAMP mice. *PLoS ONE* 10: e0138710.
- Tu, Q., et al. 2016. Peroxiredoxin 6 attenuates ischemia- and hypoxia-induced liver damage of brain-dead donors. *Mol. Med. Rep.* 13: 753-761.
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- Iida, M., et al. 2019. Src inhibition attenuates polyglutamine-mediated neuromuscular degeneration in spinal and bulbar muscular atrophy. *Nat. Commun.* 10: 4262.
- Majera, D., et al. 2020. Targeting the NPL4 adaptor of p97/VCP segregase by disulfiram as an emerging cancer vulnerability evokes replication stress and DNA damage while silencing the ATR pathway. *Cells* 9: 469.

## RESEARCH USE

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

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