

p-IκB-α (Tyr 42): sc-101714

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. There is a consensus phosphorylation site for CKII between residues 269-299, and within this range there are three phosphorylation sites that important for constitutive phosphorylation and intrinsic stability of IκB-α: Ser 283, Thr 291 and Thr 299.

REFERENCES

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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. Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. *Science* 252: 1268-1271.
4. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes IκB-like activity. *Cell* 65: 1281-1289.
5. Inoue, J.I., et al. 1992. IκB-γ, a 70 kDa protein identical to the C-terminal half of p110 NFκB; a new member of the IκB family. *Cell* 68: 1109-1120.
6. Thompson, J.E., et al. 1995. IκB-ε regulates the persistent response in biphasic activation of NFκB. *Cell* 80: 573-582.
7. Lin, R., et al. 1996. Phosphorylation of IκB-κ in the C-terminal PEST domain by casein kinase II affects intrinsic protein stability. *Mol. Cell. Biol.* 16: 1401-1409.
8. Whiteside, S.T., et al. 1997. IκB-ε, a novel member of the IκB family, controls RelA and c-Rel NFκB activity. *EMBO J.* 16: 1413-1426.
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CHROMOSOMAL LOCATION

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

SOURCE

p-IκB-α (Tyr 42) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 42 of IκB-α of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-IκB-α (Tyr 42) is recommended for detection of Tyr 42 phosphorylated IκB-α of mouse, rat and human origin by immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

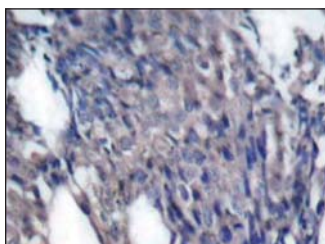
Suitable for use as control antibody for IκB-α siRNA (h): sc-29360 and IκB-α siRNA (m): sc-29361.

Molecular Weight of p-IκB-α: 41 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-IκB-α (Tyr 42): sc-101714. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.