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IκB-α (1-317): sc-4094

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.

REFERENCES

1. Ghosh, S., et al. 1990. Activation *in vitro* of NFκB by phosphorylation of its inhibitor IκB. Nature 344: 678-682.
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. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes I B-like activity. Cell 65: 1281-1289.

CHROMOSOMAL LOCATION

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

SOURCE

IκB-α (1-317) is expressed in *E. coli* as a 62 kDa tagged fusion protein corresponding to full length (amino acids 1-317) IκB-α of human origin.

PRODUCT

IκB-α (1-317) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 50 µg purified protein in PBS containing 0.1% azide, 5mM DTT and 50% glycerol.

Available as a Western blotting control; 10 µg in 0.1 ml SDS-PAGE loading buffer, IκB-α (1-317): sc-4094 WB.

APPLICATIONS

IκB-α (1-317): sc-4094 is provided as purified protein for use in protein binding studies.

IκB-α (1-317): sc-4094 WB is suitable as a Western blotting control for sc-203, sc-371, sc-847 and sc-1643.

Molecular Weight of IκB-α: 35-41 kDa.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

SELECT PRODUCT CITATIONS

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9. Vacca, A., et al. 2006. Notch3 and pre-TCR interaction unveils distinct NFκB pathways in T-cell development and leukemia. EMBO J. 25: 1000-1008.
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12. Fernández-Velasco, M., et al. 2012. NOD1 activation induces cardiac dysfunction and modulates cardiac fibrosis and cardiomyocyte apoptosis. PLoS ONE 7: e45260.

PROTOCOLS

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