

IKK-ε (6B4B5): sc-101430

BACKGROUND

The transcription factor NFκB is retained in the cytoplasm in an inactive form by the inhibitory protein IκB. Activation of NFκB requires that IκB be phosphorylated on specific serine residues, which results in targeted degradation of IκB. IκB kinase α (IKKα), previously designated CHUK, interacts with IκB-α and specifically phosphorylates IκB-α on the sites that trigger its degradation, Serines 32 and 36. The functional IKK complex contains three subunits, IKKα, IKKβ and IKKγ (also designated NEMO), and each appear to make essential contributions to IκB phosphorylation. IKK-ε, also designated IKK-i or IKBKE, is a serine/threonine kinase that shares homology with IKKα and IKKβ. IKK-ε is primarily expressed in immune cells and is induced by lipopolysaccharide and by proinflammatory cytokines including TNFα, IL-1 and IL-6. Overexpression of IKK-ε has been shown to result in phosphorylation of IκBα on Ser 32 and Ser 36, and in NFκB activation, suggesting that IKK-ε may act as an IκB kinase in the immune system.

REFERENCES

1. Verma, I.M., et al. 1995. Rel/NFκB/IκB family: intimate tales of association and dissociation. *Genes Dev.* 9: 2723-2735.
2. Thanos, D. and Maniatis, T. 1995. NFκB: a lesson in family values. *Cell* 80: 529-532.
3. Connelly, M.A. and Marcu, K.B. 1995. CHUK, a new member of the helix-loop-helix and leucine zipper families of interacting proteins, contains a serine-threonine kinase catalytic domain. *Cell. Mol. Biol. Res.* 41: 537-549.
4. Malinin, N.L., et al. 1997. MAP3K-related kinase involved in NFκB induction by TNF, CD95 and IL-1. *Nature* 385: 540-544.
5. DiDonato, J.A., et al. 1997. A cytokine-responsive IκB kinase that activates the transcription factor NFκB. *Nature* 388: 548-554.

CHROMOSOMAL LOCATION

Genetic locus: IKBKE (human) mapping to 1q32.1; Ikbke (mouse) mapping to 1 E4.

SOURCE

IKK-ε (6B4B5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-257 of IKK-ε of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IKK-ε (6B4B5) is available conjugated to agarose (sc-101430 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101430 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101430 PE), fluorescein (sc-101430 FITC), Alexa Fluor[®] 488 (sc-101430 AF488), Alexa Fluor[®] 546 (sc-101430 AF546), Alexa Fluor[®] 594 (sc-101430 AF594) or Alexa Fluor[®] 647 (sc-101430 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-101430 AF680) or Alexa Fluor[®] 790 (sc-101430 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IKK-ε (6B4B5) is recommended for detection of IKK-ε 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IKK-ε siRNA (h): sc-39056, IKK-ε siRNA (m): sc-39057, IKK-ε shRNA Plasmid (h): sc-39056-SH, IKK-ε shRNA Plasmid (m): sc-39057-SH, IKK-ε shRNA (h) Lentiviral Particles: sc-39056-V and IKK-ε shRNA (m) Lentiviral Particles: sc-39057-V.

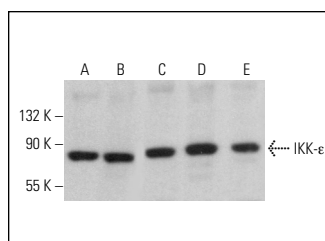
Molecular Weight of IKK-ε: 80 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, IKK-ε (m): 293T Lysate: sc-121028 or HEK293 whole cell lysate: sc-45136.

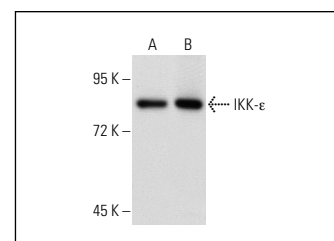
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IKK-ε (6B4B5): sc-101430. Western blot analysis of IKK-ε expression in MCF7 (A), HEK293 (B), KNRK (C), EOC 20 (D) and L6 (E) whole cell lysates.



IKK-ε (6B4B5): sc-101430. Western blot analysis of IKK-ε expression in non-transfected: sc-117752 (A) and mouse IKK-ε transfected: sc-121028 (B) 293T whole cell lysates.

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 for detailed protocols and support products.