

IKK- ϵ (6B4B5): sc-101430

BACKGROUND

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

REFERENCES

1. Verma, I.M., et al. 1995. Rel/NF κ B/I κ B family: intimate tales of association and dissociation. *Genes Dev.* 9: 2723-2735.
2. Thanos, D. and Maniatis, T. 1995. NF κ B: 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 NF κ B induction by TNF, CD95 and IL-1. *Nature* 385: 540-544.
5. DiDonato, J.A., et al. 1997. A cytokine-responsive I κ B kinase that activates the transcription factor NF κ B. *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 μ g IgG γ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101430 HRP), 200 μ g/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 μ g/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 μ g/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 μ g per 100-500 μ g 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.

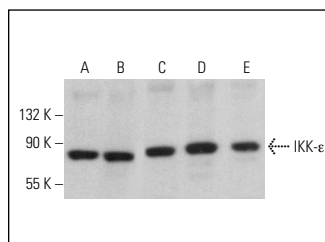
Positive Controls: MCF7 whole cell lysate: sc-2206, IKK- ϵ (m): 293T Lysate: sc-121028 or HEK293 whole cell lysate: sc-45136.

RECOMMENDED SUPPORT REAGENTS

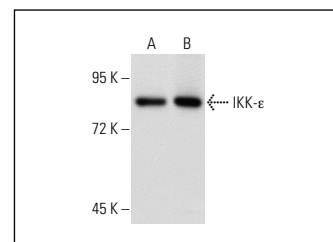
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.