

IKK γ (B-10): sc-166700

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 Serine 32 and 36, the sites that trigger its degradation. IKK α appears to be critical for NF κ B activation in response to proinflammatory cytokines. Phosphorylation of I κ B by IKK α is stimulated by the NF κ B inducing kinase (NIK), which itself is a central regulator for NF κ B activation in response to TNF and IL-1. 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.

REFERENCES

- 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.
- Thanos, D., et al. 1995. NF κ B: a lesson in family values. *Cell* 80: 529-532.
- 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.
- 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.
- 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.
- Regnier, C.H., et al. 1997. Identification and characterization of an I κ B kinase. *Cell* 90: 373-383.

CHROMOSOMAL LOCATION

Genetic locus: IKBKG (human) mapping to Xq28; Ikbkg (mouse) mapping to X A7.3.

SOURCE

IKK γ (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 380-412 at the C-terminus of IKK γ of mouse 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.

Blocking peptide available for competition studies, sc-166700 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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.

APPLICATIONS

IKK γ (B-10) is recommended for detection of IKK γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IKK γ (B-10) is also recommended for detection of IKK γ in additional species, including canine and porcine.

Suitable for use as control antibody for IKK γ siRNA (h): sc-29363, IKK γ siRNA (m): sc-29364, IKK γ shRNA Plasmid (h): sc-29363-SH, IKK γ shRNA Plasmid (m): sc-29364-SH, IKK γ shRNA (h) Lentiviral Particles: sc-29363-V and IKK γ shRNA (m) Lentiviral Particles: sc-29364-V.

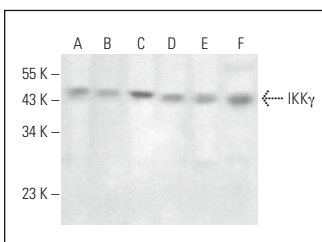
Molecular Weight of IKK γ : 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or IKK γ (h3): 293T Lysate: sc-170843.

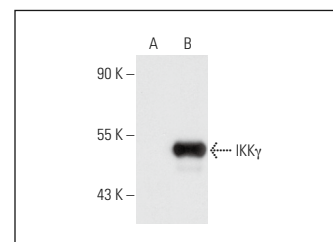
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IKK γ (B-10): sc-166700. Western blot analysis of IKK γ expression in HeLa (A), Jurkat (B), PC-3 (C), U-251-MG (D), NIH/3T3 (E) and c4 (F) whole cell lysates.



IKK γ (B-10): sc-166700. Western blot analysis of IKK γ expression in non-transfected: sc-117752 (A) and human IKK γ transfected: sc-170843 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Li, Z.Y., et al. 2019. Contribution of tissue transglutaminase to the severity of hepatic fibrosis resulting from *Schistosoma japonicum* infection through the regulation of IL-33/ST2 expression. *Parasit. Vectors* 12: 302.



See IKK γ (F-10): sc-166398 for IKK γ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.