

# IKK-i (M-17): sc-5693

## BACKGROUND

The transcription factor NF $\kappa$ B is retained in the cytoplasm in an inactive form by the inhibitory protein I $\kappa$ B. Activation of NF $\kappa$ B requires that I $\kappa$ B be phosphorylated on specific serine residues, which results in targeted degradation of I $\kappa$ B. I $\kappa$ B kinase  $\alpha$  (IKK $\alpha$ ), previously designated CHUK, interacts with I $\kappa$ B- $\alpha$  and specifically phosphorylates I $\kappa$ B- $\alpha$  on the sites that trigger its degradation, serines 32 and 36. The functional IKK complex contains three subunits, IKK $\alpha$ , IKK $\beta$  and IKK $\gamma$  (also designated NEMO), and each appear to make essential contributions to I $\kappa$ B phosphorylation. IKK-i is a serine/threonine kinase that shares homology with IKK $\alpha$  and IKK $\beta$ . IKK-i is primarily expressed in immune cells and is induced by lipopolysaccharide and by proinflammatory cytokines including TNF $\alpha$ , IL-1 and IL-6. Overexpression of IKK-i was shown to result in phosphorylation of I $\kappa$ B $\alpha$  on Ser32 and Ser36, and in NF $\kappa$ B activation, suggesting that IKK-i may act as an I $\kappa$ B kinase in the immune system.

## CHROMOSOMAL LOCATION

Genetic locus: Ikbke (mouse) mapping to 1 E4.

## SOURCE

IKK-i (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IKK-i of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5693 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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-i (M-17) is recommended for detection of IKK-i of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

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

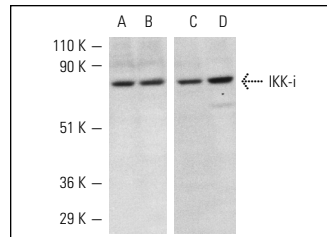
Molecular Weight of IKK-i: 80 kDa.

Positive Controls: RAW 309 Cr.1 cell lysate: sc-3814, RAW 309 Cr.1 + LPS cell lysate: sc-24770 or RAW 264.7 + LPS/PMA cell lysate: sc-2212.

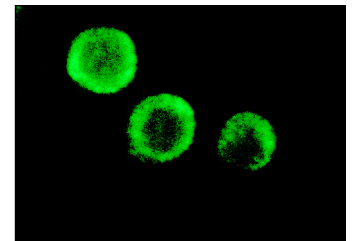
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Western blot analysis of IKK-i expression in LPS-induced RAW 309 Cr.1 (A,C) and PMA-induced RAW 264.7 (B,D) whole cell lysates. Antibodies tested include IKK-i (Q-15): sc-9913 (A,B) and IKK-i (M-17): sc-5693 (C,D).



IKK-i (M-17): sc-5693. Immunofluorescence staining of methanol-fixed RAW 309 Cr.1 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. He, J., et al. 2010. The p85 $\beta$  regulatory subunit of PI3K serves as a substrate for PTEN protein phosphatase activity during Insulin mediated signaling. *Biochem. Biophys. Res. Commun.* 397: 513-519.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **IKK-i (A-11): sc-376114** or **IKK-i (E-2): sc-374546**, our highly recommended monoclonal alternatives to IKK-i (M-17).