

# IKK $\beta$ (S-13): sc-34674

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

## CHROMOSOMAL LOCATION

Genetic locus: IKBKB (human) mapping to 8p11.21; Ikbkb (mouse) mapping to 8 A2.

## SOURCE

IKK $\beta$  (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IKK $\beta$  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-515648 P, (100  $\mu$ 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.

## APPLICATIONS

IKK $\beta$  (S-13) is recommended for detection of IKK $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\beta$  (S-13) is also recommended for detection of IKK $\beta$  in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for IKK $\beta$  siRNA (h): sc-35644, IKK $\beta$  siRNA (m): sc-35645, IKK $\beta$  shRNA Plasmid (h): sc-35644-SH, IKK $\beta$  shRNA Plasmid (m): sc-35645-SH, IKK $\beta$  shRNA (h) Lentiviral Particles: sc-35644-V and IKK $\beta$  shRNA (m) Lentiviral Particles: sc-35645-V.

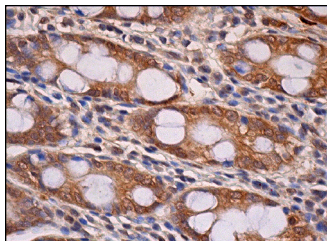
Molecular Weight of IKK $\beta$ : 87 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

## 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



IKK $\beta$  (S-13): sc-34674. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Qiao, G., et al. 2008. T-cell receptor-induced NF $\kappa$ B activation is negatively regulated by E3 ubiquitin ligase Cbl- $\beta$ . *Mol. Cell. Biol.* 28: 2470-2480.
2. da Rocha, A.L., et al. 2015. Downhill running-based overtraining protocol improves hepatic Insulin signaling pathway without concomitant decrease of inflammatory proteins. *PLoS ONE* 10: e0140020.

## RESEARCH USE

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

## PROTOCOLS

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



Try **IKK $\beta$  (H-4): sc-8014** or **IKK $\beta$  (H-4): sc-8014**, our highly recommended monoclonal alternatives to IKK $\beta$  (S-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IKK $\beta$  (H-4): sc-8014**.