

IKK β (T-20): sc-7330

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 Serines 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.

CHROMOSOMAL LOCATION

Genetic locus: IKBKB (human) mapping to 8p11.21.

SOURCE

IKK β (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of IKK β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7330 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IKK β (T-20) is recommended for detection of IKK β of 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)], 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).

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

Molecular Weight of IKK β : 87 kDa.

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

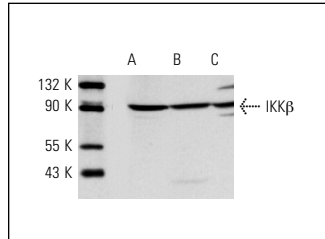
STORAGE

Store at 4 $^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

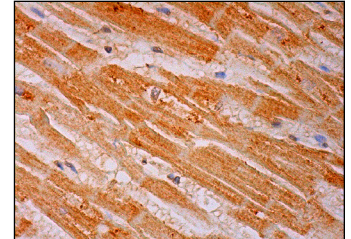
RESEARCH USE

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

DATA



IKK β (T-20): sc-7330. Western blot analysis of IKK β expression in Jurkat (A), HL-60 (B) and HeLa (C) whole cell lysates.



IKK β (T-20): sc-7330. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

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- Fernandez-Majada, V., et al. 2007. Nuclear IKK activity leads to dysregulated Notch-dependent gene expression in colorectal cancer. *Proc. Natl. Acad. Sci. USA* 104: 276-281.
- Baumann, B., et al. 2007. Constitutive IKK2 activation in acinar cells is sufficient to induce pancreatitis *in vivo*. *J. Clin. Invest.* 117: 1502-1513.
- Bhattacharyya, S., et al. 2007. Tumor-induced oxidative stress perturbs nuclear factor- κ B activity-augmenting tumor necrosis factor- α -mediated T-cell death: protection by curcumin. *Cancer Res.* 67: 362-370.
- Pathak, S.K., et al. 2007. Direct extracellular interaction between the early secreted antigen ESAT-6 of *Mycobacterium tuberculosis* and TLR2 inhibits TLR signaling in macrophages. *Nat. Immunol.* 8: 610-618.
- Batsi, C., et al. 2009. Chronic NF κ B activation delays RasV12-induced premature senescence of human fibroblasts by suppressing the DNA damage checkpoint response. *Mech. Ageing Dev.* 130: 409-419.
- Lodewick, J., et al. 2009. Acetylation of the human T-cell leukemia virus type 1 Tax oncoprotein by p300 promotes activation of the NF κ B pathway. *Virology* 30: 68-78.
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Try **IKK β (H-4): sc-8014** or **IKK α (H-4): sc-8014**, our highly recommended monoclonal alternatives to IKK β (T-20). Also, for AC, HRP, FITC, PE, Alexa Fluor $^{\text{®}}$ 488 and Alexa Fluor $^{\text{®}}$ 647 conjugates, see **IKK β (H-4): sc-8014**.