

IKK β (P-20): sc-34673

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

1. Thanos, D., et al. 1995. NF κ B: a lesson in family values. *Cell* 80: 529-532.
2. Connelly, M.A., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

IKK β (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IKK β of mouse 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-34673 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IKK β (P-20) is recommended for detection of IKK β 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).

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

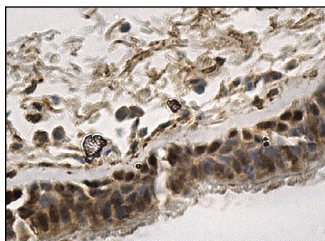
Molecular Weight of IKK β : 87 kDa.

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° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



IKK β (P-20): sc-34673. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Fillmann, H., et al. 2007. Glutamine inhibits over-expression of pro-inflammatory genes and down-regulates the nuclear factor κ B pathway in an experimental model of colitis in the rat. *Toxicology* 236: 217-226.
2. Ropelle, E.R., et al. 2010. IL-6 and IL-10 anti-inflammatory activity links exercise to hypothalamic Insulin and leptin sensitivity through IKK β and ER stress inhibition. *PLoS Biol.* 8: e1000465.
3. Ortis, F., et al. 2012. Differential usage of NF- κ B activating signals by IL-1 β and TNF- α in pancreatic β cells. *FEBS Lett.* 586: 984-989.
4. Gao, Y., et al. 2014. Rhein exerts pro- and anti-inflammatory actions by targeting IKK β inhibition in LPS-activated macrophages. *Free Radic. Biol. Med.* 72: 104-112.
5. Shukla, S., et al. 2015. Suppression of NF κ B and NF κ B-regulated gene expression by apigenin through I κ B α and IKK pathway in TRAMP mice. *PLoS ONE* 10: e0138710.
6. Oliveira, V., et al. 2015. Diets containing α -Linolenic (ω 3) or Oleic (ω 9) fatty acids rescues obese mice from Insulin resistance. *Endocrinology* 156: 4033-4046.

RESEARCH USE

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


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