



p-IKK α / β (Ser 176): sc-21661

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) interacts with I κ B- α and specifically phosphorylates I κ B- α on the sites that trigger its degradation, Serines 32 and 36. The functional IKK complex contains three subunits, designated IKK α , IKK β and IKK γ (also designated NEMO); each appears to make essential contributions to I κ B phosphorylation. NF κ B inducing kinase (NIK) phosphorylates IKK α at Serine 176.

REFERENCES

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- Ling, L., Cao, Z. and Goeddel, D.V. 1998. NF κ B-inducing kinase activates IKK α by phosphorylation of Ser 176. *Proc. Natl. Acad. Sci. USA* 95: 3792-3797

CHROMOSOMAL LOCATION

Genetic locus: CHUK (human) mapping to 10q24-25, IKBKB (human) mapping to 8p11.2; Chuk (mouse) mapping to 19 C3, Ikbkb (mouse) mapping to 8 A3-A4.

SOURCE

p-IKK α / β (Ser 176) is available as either goat (sc-21661) or rabbit (sc-21661-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Ser 176 of IKK α of mouse origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-21661 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-IKK α / β (Ser 176) is recommended for detection of Ser 176 phosphorylated IKK α and Ser 177 phosphorylated 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of p-IKK α : 85 kDa.

Molecular Weight of p-IKK β : 87 kDa.

Positive Controls: human breast tumor, Jurkat whole cell lysate: sc-2204 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-21661): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-21661-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (range: 1:2000-1:5000); Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: for goat primary antibody (sc-21661): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (range: 1:100-1:400), for rabbit primary antibody (sc-21661-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Shambharkar, P.B., Blonska, M., Pappu, B.P., Li, H., You, Y., Sakurai, H., Darnay, B.G., Hara, H., Penninger, J. and Lin, X. 2007. Phosphorylation and ubiquitination of the I κ B kinase complex by two distinct signaling pathways. *EMBO J.* 26: 1794-1805.
- Fan, S., Meng, Q., Laterra, J.J. and Rosen, E.M. 2009. Role of Src signal transduction pathways in scatter factor-mediated cellular protection. *J. Biol. Chem.* 97: 7561-7577.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.