

# p-I $\kappa$ B- $\beta$ (Ser 23): sc-101715

## BACKGROUND

On the basis of both functional and structural considerations, members of the I $\kappa$ B family of proteins can be divided into four groups. The first of these groups, I $\kappa$ B- $\alpha$ , includes the avian protein pp40 and the mammalian MAD-3, both of which inhibit binding of p50-p65 NF $\kappa$ B complex or Rel protein to their cognate binding sites but do not inhibit the binding of p50 homodimer to  $\kappa$ B sites, suggesting that the I $\kappa$ B- $\alpha$  family binds to the p65 subunit of p50-p65 heterocomplex through Ankyrin repeats. The second member of the I $\kappa$ B family is represented by a protein designated I $\kappa$ B- $\beta$ . The third group of I $\kappa$ B proteins is represented by I $\kappa$ B- $\gamma$ , a protein identical in sequence with the C-terminal domain of the p110 precursor of NF $\kappa$ B p50 and expressed predominantly in lymphoid cells. An additional I $\kappa$ B family member has been identified as I $\kappa$ B- $\epsilon$ , a protein which has several phosphorylated forms and is primarily found complexed with RelA and/or c-Rel.

## REFERENCES

1. Ghosh, S., et al. 1990. Activation *in vitro* to NF $\kappa$ B by phosphorylation of its inhibitor I $\kappa$ B. *Nature* 344: 678-682.
2. Kerr, L.D., et al. 1991. The Rel-associated pp40 protein prevents DNA binding of Rel and NF $\kappa$ B: relationship with I $\kappa$ B- $\beta$  and regulation by phosphorylation. *Genes Dev.* 5: 1464-1476.
3. Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. *Science* 252: 1268-1271.
4. Haskill, S., et al. 1991. Characterization of an immediate-early gene induced in adherent monocytes that encodes I $\kappa$ B-like activity. *Cell* 65: 1281-1289.
5. Inoue, J.I., et al. 1992. I $\kappa$ B- $\gamma$ , a 70 kDa protein identical to the C-terminal half of p110 NF $\kappa$ B; a new member of the I $\kappa$ B family. *Cell* 68: 1109-1120.
6. Thompson, J.E., et al. 1995. I $\kappa$ B- $\epsilon$  regulates the persistent response in biphasic activation of NF $\kappa$ B. *Cell* 80: 573-582.
7. Lin, R., et al. 1996. Phosphorylation of I $\kappa$ B- $\kappa$  in the C-terminal PEST domain by casein kinase II affects intrinsic protein stability. *Mol. Cell. Biol.* 16: 1401-1409.
8. Whiteside, S.T., et al. 1997. I $\kappa$ B- $\epsilon$ , a novel member of the I $\kappa$ B family, controls RelA and c-Rel NF $\kappa$ B activity. *EMBO J.* 16: 1413-1426.
9. Sriwijitkamol, A. et al. 2006. Reduced skeletal muscle inhibitor of  $\kappa$ B- $\beta$  content is associated with insulin resistance in subjects with type 2 diabetes: reversal by exercise training. *Diabetes* 55: 760-767.

## CHROMOSOMAL LOCATION

Genetic locus: NFKB1B (human) mapping to 19q13.2; Nfkb1b (mouse) mapping to 7 A3.

## SOURCE

p-I $\kappa$ B- $\beta$  (Ser 23) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 23 of I $\kappa$ B- $\beta$  of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p-I $\kappa$ B- $\beta$  (Ser 23) is recommended for detection of Ser 23 phosphorylated I $\kappa$ B- $\beta$  of human and, to a lesser extent, mouse and rat origin by immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

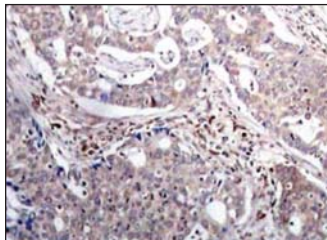
Suitable for use as control antibody for I $\kappa$ B- $\beta$  siRNA (h): sc-29362 and I $\kappa$ B- $\beta$  siRNA (m): sc-35623.

Molecular Weight of p-I $\kappa$ B- $\beta$ : 45 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



p-I $\kappa$ B- $\beta$  (Ser 23): sc-101715. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.

## 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.

## PROTOCOLS

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