

# p-NFκB p65 (Thr 435): sc-101754

## BACKGROUND

Proteins encoded by the v-Rel viral oncogene and its cellular homolog, c-Rel, are members of a family of transcription factors that include the two subunits of the transcription factor NFκB (p50 and p65) and the *Drosophila* maternal morphogen, Dorsal. Both proteins specifically bind to DNA sequences that are the same or slight variations of the 10 bp κB sequence in the immunoglobulin κ light chain enhancer. This same sequence is also present in a number of other cellular and viral enhancers. The DNA binding activity of NFκB is activated and NFκB is subsequently transported from the cytoplasm to the nucleus in cells exposed to mitogens or growth factors. cDNAs encoding precursors for two distinct proteins have been described, designated p105 and p100. The p105 precursor contains p50 at its N-terminus and a C-terminal region that when expressed as a separate molecule, designated PDI, binds to p50 and regulates its activity. The NFκB transcription factor is a protein complex consisting of a DNA binding subunit and an associated protein. The DNA binding subunit, also referred to as Rel A, is functionally related to c-Rel p75 and RelB p68. NFκB p65 is phosphorylated at Serine 311 as a response to protein kinase C ζ.

## REFERENCES

- Meyer, R., et al. 1991. Cloning of the DNA binding subunit of human NFκB: the level of its mRNA is strongly regulated by phorbol ester or tumor necrosis factor α. *Proc. Natl. Acad. Sci. USA* 88: 966-970.
- Schmid, R.M., et al. 1991. Cloning of an NFκB subunit which stimulates HIV transcription in synergy with p65. *Nature* 352: 733-736.
- Perkins, N.D., et al. 1992. Distinct combinations of NFκB subunits determine the specificity of transcriptional activation. *Proc. Natl. Acad. Sci. USA* 89: 1529-1533.
- Ballard, D.W., et al. 1992. The 65 kDa subunit of human NFκB functions as a potent transcriptional activator and a target for v-Rel-mediated repression. *Proc. Natl. Acad. Sci. USA* 89: 1875-1879.
- Hatada, E.N., et al. 1992. The Ankyrin repeat domains of the NFκB precursor p105 and the proto-oncogene Bcl-3 act as specific inhibitors of NFκB DNA binding. *Proc. Natl. Acad. Sci. USA* 89: 2489-2493.
- Vermeulen, L., et al. 2003. Transcriptional activation of the NFκB p65 subunit by mitogen- and stress-activated protein kinase-1 (MSK1). *EMBO J.* 22: 1313-1324.

## CHROMOSOMAL LOCATION

Genetic locus: RELA (human) mapping to 11q13.1; Rela (mouse) mapping to 19 A.

## SOURCE

p-NFκB p65 (Thr 435) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Thr 435 of NFκB p65 of human 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 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

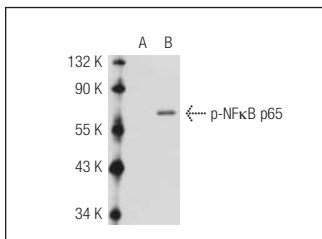
p-NFκB p65 (Thr 435) is recommended for detection of Thr 435 phosphorylated NFκB p65 of human origin; correspondingly phosphorylated Thr 433 of mouse origin and correspondingly phosphorylated Thr 434 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NFκB p65 siRNA (h): sc-29410, NFκB p65 siRNA (m): sc-29411, NFκB p65 siRNA (r): sc-61876, NFκB p65 shRNA Plasmid (h): sc-29410-SH, NFκB p65 shRNA Plasmid (m): sc-29411-SH, NFκB p65 shRNA Plasmid (r): sc-61876-SH, NFκB p65 shRNA (h) Lentiviral Particles: sc-29410-V, NFκB p65 shRNA (m) Lentiviral Particles: sc-29411-V and NFκB p65 shRNA (r) Lentiviral Particles: sc-61876-V.

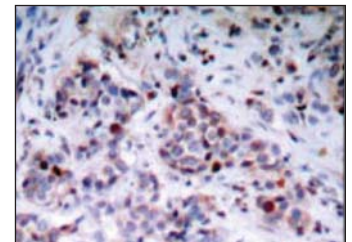
Molecular Weight of p-NFκB p65: 65 kDa.

Positive Controls: HeLa + TNFα cell lysate: sc-2228, NFκB p65 (m): 293T Lysate: sc-122027 or human breast carcinoma tissue.

## DATA



p-NFκB p65 (Thr 435): sc-101754. Western blot analysis of NFκB p65 phosphorylation in non-transfected: sc-117752 (A) and mouse NFκB p65 transfected: sc-122027 (B) 293T whole cell lysates.



p-NFκB p65 (Thr 435): sc-101754. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear staining.

## 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.