

p-NFκB p50 (Ser 337): sc-33022

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 morphagen, dorsal. These proteins share sequence homology over a region of 300 amino acids at their NH₂-terminus, the region that contains their DNA binding and dimerization domains. The DNA binding activity of NFκB is activated and rapidly 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. These proteins, designated p105 and p100, are highly related but map on different chromosomes. The p105 (p110) precursor contains p50 at its amino-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 Rel B p68. The p50 subunit is derived from the N-terminus of a precursor designated p105. A second protein designated p52 (previously referred to as p49) is derived from the p100 precursor and may act as an alternative to p50 in NFκB heterodimers. NFκB p50 Serine 337 is phosphorylated in response to PKA. The phosphorylation of NFκB p50 Serine 337 regulates the binding ability of NFκB p50 and has an impact on NFκB transcription.

REFERENCES

- Meyer, R., et al. 1991. Cloning of the DNA-binding subunit of human nuclear factor κB: the level of its mRNA is strongly regulated by phorbol ester or tumor necrosis factor α. Proc. Natl. Acad. Sci. USA 88: 966-970.
- Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. Science 253: 1268-1271.

CHROMOSOMAL LOCATION

Genetic locus: NFKB1 (human) mapping to 4q24; Nfkb1 (mouse) mapping to 3 G3.

SOURCE

p-NFκB p50 (Ser 337) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 337 phosphorylated NFκB p50 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-33022 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

p-NFκB p50 (Ser 337) is recommended for detection of Ser 337 phosphorylated NFκB p50 of mouse, rat and human 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 (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).

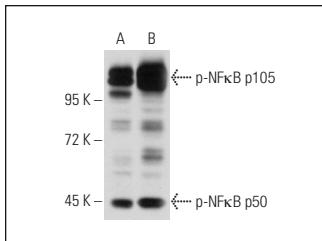
p-NFκB p50 (Ser 337) is also recommended for detection of correspondingly phosphorylated NFκB p50 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NFκB p50 siRNA (h): sc-29407, NFκB p50 siRNA (m): sc-29408, NFκB p50 shRNA Plasmid (h): sc-29407-SH, NFκB p50 shRNA Plasmid (m): sc-29408-SH, NFκB p50 shRNA (h) Lentiviral Particles: sc-29407-V and NFκB p50 shRNA (m) Lentiviral Particles: sc-29408-V.

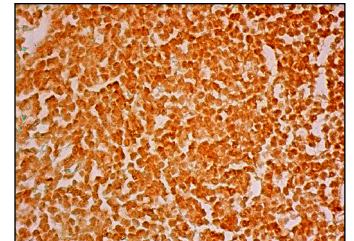
Molecular Weight of p-NFκB p50: 50 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa + Calyculin A cell lysate: sc-2271 or HeLa whole cell lysate: sc-2200.

DATA



p-NFκB p50 (Ser 337): sc-33022. Western blot analysis of NFκB p50 phosphorylation in 293T (A) and K-562 (B) whole cell lysates.



p-NFκB p50 (Ser 337): sc-33022. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal centers and cells in non-germinal centers.

SELECT PRODUCT CITATIONS

- Siejka, A., et al. 2010. Mechanisms of inhibition of human benign prostatic hyperplasia *in vitro* by the luteinizing hormone-releasing hormone antagonist cetrorelix. BJU Int. 106: 1382-1388.
- Zhang, J., et al. 2013. Phosphorylation and degradation of S6K1 (p70^{S6K1}) in response to persistent JNK1 activation. Biochim. Biophys. Acta 1832: 1980-1988.

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Try **p-NFκB p50 (A-8): sc-271908**, our highly recommended monoclonal alternative to p-NFκB p50 (Ser 337).