

p-NFκB p50 (Ser 907): sc-101746

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. 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 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 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 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.
- Davis, N., et al. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. Science 253: 1268-1271.
- Schmid, R.M., et al. 1991. Cloning of an NFκB subunit which stimulates HIV transcription in synergy with p65. Nature 352: 733-736.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-NFκB p50 (Ser 907) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 907 of NFκB p50 of human origin.

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 p50 (Ser 907) is recommended for detection of Ser 907 phosphorylated NFκB p50 of 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NFκB p50 siRNA (h): sc-29407.

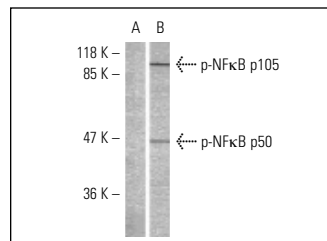
Molecular Weight of p-NFκB p50: 50 kDa.

Positive Controls: TNFα + HeLa whole cell lysate: sc-2228 or human breast carcinoma tissue.

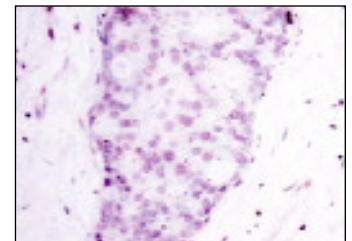
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution 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 Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-NFκB p50 (Ser 907): sc-101746. Western blot analysis of phosphorylated NFκB p50 expression in untreated (A) and TNF-α treated (B) HeLa whole cell lysates.



p-NFκB p50 (Ser 907): sc-101746. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear staining.

SELECT PRODUCT CITATIONS

- Cai, C., et al. 2011. Classical and alternative nuclear factor-κB pathways: a comparison among normal prostate, benign prostate hyperplasia and prostate cancer. Pathol. Oncol. Res. 17: 873-878.

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.