# NFκB p50 (h): 293T Lysate: sc-116112



The Power to Question

## **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 NF $\kappa$ B (p50 and p65) and the *Drosophila* maternal morphagen, dorsal. These proteins share sequence homology over a region of 300 amino acids at their NH<sub>2</sub>-terminus, the region that contains their DNA binding and dimerization domains. The DNA binding activity of NF $\kappa$ B 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.

## **REFERENCES**

- 1. Meyer, R., et al. 1991. Cloning of the DNA-binding subunit of human nuclear factor  $\kappa B$ : the level of its mRNA is strongly regulated by phorbol ester or tumor necrosis factor  $\alpha$ . Proc. Natl. Acad. Sci. USA 88: 966-970.
- 2. Schmid, R.M., et al. 1991. Cloning of an NF $\kappa$ B subunit which stimulates HIV transcription in synergy with p65. Nature 352: 733-736.
- 3. 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.
- 4. Hatada, E.N., et al. 1992. The Ankyrin repeat domains of the NF $\kappa$ B precursor p105 and the proto-oncogene Bcl-3 act as specific inhibitors of NF $\kappa$ B DNA binding. Proc. Natl. Acad. Sci. USA 89: 2489-2493.
- 5. Henkel, T., et al. 1992. Intramolecular masking of the nuclear location signal and dimerization domain in the precursor for the p50 NF $\kappa$ B subunit. Cell 69: 1121-1133.
- 6. Beg, A.A., et al. 1995. Embryonic lethality and liver degeneration in mice lacking the RelA component of NF $\kappa$ B. Nature 376: 167-170.
- 7. Huxford, T., et al. 1998. The crystal structure of the  $I\kappa B\alpha/NF\kappa B$  complex reveals mechanisms of  $NF\kappa B$  inactivation. Cell 95: 759-770.
- 8. Chen, L.F., et al. 2001. Duration of nuclear NF $\kappa$ B action regulated by reversible acetylation. Science 293: 1653-1657.
- 9. Zhang, J., et al. 2007. NFκB1/p50 is not required for tumor necrosis factorstimulated growth of primary mammary epithelial cells: implications for NFκB2/p52 and RelB. Endocrinology 148: 268-278.

## CHROMOSOMAL LOCATION

Genetic locus: NFKB1 (human) mapping to 4q24.

## **PRODUCT**

 $NF\kappa B1$  p50 (h): 293T Lysate represents a lysate of human  $NF\kappa B1$  p50 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

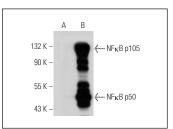
#### **APPLICATIONS**

 $NF\kappa B1$  p50 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive  $NF\kappa B1$  p50 antibodies. Recommended use: 10-20  $\mu I$  per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NF $\kappa$ B p50 (4D1): sc-53744 is recommended as a positive control antibody for Western Blot analysis of enhanced human NF $\kappa$ B1 p50 expression in NF $\kappa$ B1 p50 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



NF $\kappa$ B p50 (4D1): sc-53744. Western blot analysis of NF $\kappa$ B p50 expression in non-transfected: sc-117752 (**A**) and human NF $\kappa$ B p50 transfected: sc-116112 (**B**) 293T whole cell lysates.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.

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