

NFκB p50 (4D1): sc-53744

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 Pdl, binds to p50 and regulates its activity.

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.
- Schmid, R.M., et al. 1991. Cloning of an NFκB subunit which stimulates HIV transcription in synergy with p65. *Nature* 352: 733-736.

CHROMOSOMAL LOCATION

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

SOURCE

NFκB p50 (4D1) is a mouse monoclonal antibody raised against full length NFκB p50 of human origin.

PRODUCT

Each vial contains 100 μg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NFκB p50 (4D1) is recommended for detection of 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 (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of NFκB p50: 50 kDa.

Positive Controls: HeLa + IFN-γ cell lysate: sc-2222, SW480 nuclear extract: sc-2155 or NFκB p50 (h): 293T Lysate: sc-116112.

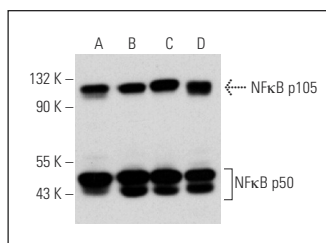
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

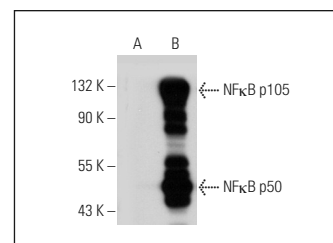
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



NFκB p50 (4D1): sc-53744. Western blot analysis of NFκB p50 expression in IFN γ -treated HeLa (A) and A-431 (B) whole cell lysates and PC-3 (C) and SW480 (D) nuclear extracts.



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

SELECT PRODUCT CITATIONS

- González, R., et al. 2007. Cytoprotective properties of α-tocopherol are related to gene regulation in cultured D-galactosamine-treated human hepatocytes. *Free Radic. Biol. Med.* 43: 1439-1452.
- Yang, B., et al. 2014. A novel pathway links oxidative stress to loss of Insulin growth factor-2 (IGF2) imprinting through NFκB activation. *PLoS ONE* 9: e88052.
- Tsagozis, P., et al. 2014. All *trans*-retinoic acid abrogates the pro-tumorigenic phenotype of prostate cancer tumor-associated macrophages. *Int. Immunopharmacol.* 23: 8-13.
- Okuda, M.H., et al. 2014. Green tea extract improves high fat diet-induced hypothalamic inflammation, without affecting the serotonergic system. *J. Nutr. Biochem.* 25: 1084-1089.
- Rajalakshmy, A.R., et al. 2014. HCV core and NS3 proteins mediate toll like receptor induced innate immune response in corneal epithelium. *Exp. Eye Res.* 128: 117-128.
- Oh, J.E., et al. 2014. A nuclear factor κ B-derived inhibitor tripeptide inhibits UVB-induced photoaging process. *J. Dermatol. Sci.* 76: 196-205.
- Castillo Sanchez, R., et al. 2016. Bisphenol A induces migration through a GPER-, FAK-, Src-, and ERK2-dependent pathway in MDA-MB-231 breast cancer cells. *Chem. Res. Toxicol.* 29: 285-295.
- Ren, S., et al. 2016. Hepatitis B virus stimulated fibronectin facilitates viral maintenance and replication through two distinct mechanisms. *PLoS ONE* 11: e0152721.
- Ponce-Cusi, R. and Calaf, G.M. 2016. Apoptotic activity of 5-fluorouracil in breast cancer cells transformed by low doses of ionizing α-particle radiation. *Int. J. Oncol.* 48: 774-782.

CONJUGATES

See **NFκB p50 (E-10): sc-8414** for NFκB p50 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.