SANTA CRUZ BIOTECHNOLOGY, INC.

NFκB p50 (E-10): sc-8414

SANTA CRUZ BIOTECHNOLOGY

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 NFκB (p50 and p65) and the *Drosophila* maternal morphagen, dorsal. These proteins share sequence homology over a region of 300 amino acids at their NH_2-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.

CHROMOSOMAL LOCATION

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

SOURCE

NFκB p50 (E-10) is a mouse monoclonal antibody raised against amino acids 120-239 mapping at the N-terminus of NFκB p50 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8414 X, 200 µg/0.1 ml.

NFκB p50 (E-10) is available conjugated to agarose (sc-8414 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-8414 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8414 PE), fluorescein (sc-8414 FITC), Alexa Fluor® 488 (sc-8414 AF488), Alexa Fluor® 546 (sc-8414 AF546), Alexa Fluor® 594 (sc-8414 AF594) or Alexa Fluor® 647 (sc-8414 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8414 AF680) or Alexa Fluor® 790 (sc-8414 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, NFκB p50 (E-10) is available conjugated to Alexa Fluor® 405 (sc-8414 AF405, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

NFκB p50 (E-10) is recommended for detection of NFκB p50 and p105 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

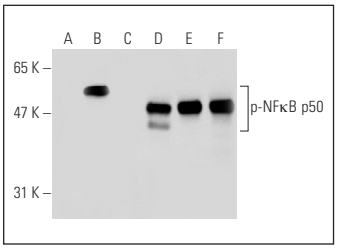
NFκB p50 (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NFκB p50/p105: 50/105 kDa.

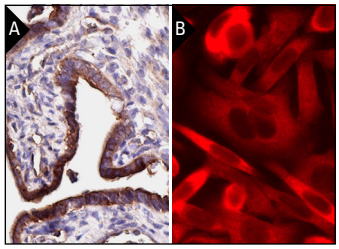
STORAGE

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

DATA



Western blot analysis of NFκB p50 phosphorylation in untreated (**A**,**D**), TNFα and Calyculin A treated (**B**,**E**) and TNFα, Calyculin A and lambda protein phosphatase treated (**C**,**F**) HeLa whole cell lysates. Antibodies tested include p-NFκB p50 (A-8): sc-271908 (**A**,**B**,**C**) and NFκB p50 (E-10): sc-8414 (**D**,**E**,**F**).



NFκB p50 (E-10): sc-8414. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (**A**). NFκB p50 (E-10) PE: sc-8414 PE. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic localization.Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Shah, N., et al. 1999. Activation of nuclear factor κB by polyamines in breast cancer cells. Biochemistry 38: 14763-14774.
2. Do-Umehara, H.C., et al. 2013. Suppression of inflammation and acute lung injury by Miz1 via repression of C/EBP-δ. Nat. Immunol. 14: 461-469.
3. Lan, N., et al. 2014. 25-hydroxyvitamin D_3-deficiency enhances oxidative stress and corticosteroid resistance in severe asthma exacerbation. PLoS ONE 9: e111599.
4. Voce, D.J., et al. 2015. Nfkb1 is a haploinsufficient DNA damage-specific tumor suppressor. Oncogene 34: 2807-2813.
5. Shen, Z., et al. 2016. Delta-like ligand 4 modulates liver damage by down-regulating chemokine expression. Am. J. Pathol. 186: 1874-1889.
6. Wang, X.P., et al. 2017. Bovine miR-146a regulates inflammatory cytokines of bovine mammary epithelial cells via targeting the TRAF6 gene. J. Dairy Sci. 100: 7648-7658.
7. Jackson, M., et al. 2018. Mitochondrial genome and functional defects in osteosarcoma are associated with their aggressive phenotype. PLoS ONE 13: e0209489.
8. Yanar, K., et al. 2019. The effects of δ-9-tetrahydrocannabinol on Krüppel-like factor-4 expression, redox homeostasis, and inflammation in the kidney of diabetic rat. J. Cell. Biochem. 120: 16219-16228.
9. Kim, M., et al. 2020. Sestrins are evolutionarily conserved mediators of exercise benefits. Nat. Commun. 11: 190.

RESEARCH USE

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