

NFκB p50 (D-6): sc-166588

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.

CHROMOSOMAL LOCATION

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

SOURCE

NFκB p50 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 320-357 at the C-terminus of NFκB p50 of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ 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-166588 X, 200 μg/0.1 ml.

NFκB p50 (D-6) is available conjugated to agarose (sc-166588 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166588 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166588 PE), fluorescein (sc-166588 FITC), Alexa Fluor® 488 (sc-166588 AF488), Alexa Fluor® 546 (sc-166588 AF546), Alexa Fluor® 594 (sc-166588 AF594) or Alexa Fluor® 647 (sc-166588 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166588 AF680) or Alexa Fluor® 790 (sc-166588 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166588 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

NFκB p50 (D-6) is recommended for detection of NFκB p50 and p105 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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). NFκB p50 (D-6) is also recommended for detection of NFκB p50 and p105 in additional species, including canine, bovine, porcine and avian.

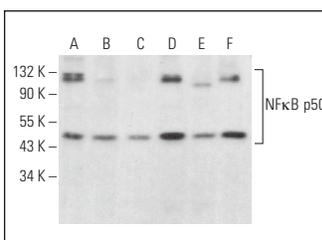
NFκB p50 (D-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NFκB p50: 50 kDa.

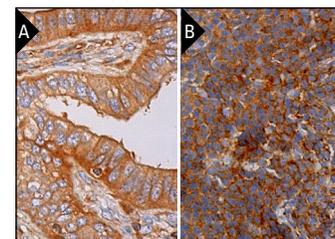
Molecular Weight of NFκB p105: 105 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, TK-1 whole cell lysate: sc-364798 or C2C12 whole cell lysate: sc-364188.

DATA



NFκB p50 (D-6): sc-166588. Western blot analysis of NFκB p50 expression in A-431 (A), C2C12 (B), WEHI-231 (C), THP-1 (D), TK-1 (E) and Daudi (F) whole cell lysates.



NFκB p50 (D-6): sc-166588. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and membrane staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of cells in germinal center and cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Rasheed, Z. and Haqqi, T.M. 2012. Endoplasmic reticulum stress induces the expression of COX-2 through activation of eIF2α, p38^{MAPK} and NFκB in advanced glycation end products stimulated human chondrocytes. *Biochim. Biophys. Acta* 1823: 2179-2189.
- Nath, N., et al. 2015. Nitric oxide-releasing aspirin suppresses NFκB signaling in estrogen receptor negative breast cancer cells *in vitro* and *in vivo*. *Molecules* 20: 12481-12499.
- Ou, B., et al. 2016. CCR4 promotes metastasis via ERK/NFκB/MMP13 pathway and acts downstream of TNF-α in colorectal cancer. *Oncotarget* 7: 47637-47649.
- Luo, G., et al. 2018. TNF-α and RANKL promote osteoclastogenesis by upregulating RANK via the NFκB pathway. *Mol. Med. Rep.* 17: 6605-6611.

RESEARCH USE

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