SANTA CRUZ BIOTECHNOLOGY, INC.

p-NFκB p65 (49.Ser 311): sc-135769

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 morphogen, dorsal. Both proteins specifically bind to DNA sequences that are the same or slight variations of the 10 bp κB sequence in the immunoglobulin κ light chain enhancer. This same sequence is also present in a number of other cellular and viral enhancers. The DNA binding activity of NFκB is activated and NFκB is subsequently 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, designated p105 and p100. The p105 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 RelB p68. NFκB p65 is phosphorylated at Serine 311 as a response to protein kinase C ζ.

REFERENCES

1. 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.
2. Schmid, R.M., et al. 1991. Cloning of an NFκB subunit which stimulates HIV transcription in synergy with p65. Nature 352: 733-736.
3. Perkins, N.D., et al. 1992. Distinct combinations of NFκB subunits determine the specificity of transcriptional activation. Proc. Natl. Acad. Sci. USA 89: 1529-1533.

CHROMOSOMAL LOCATION

Genetic locus: RELA (human) mapping to 11q13.1; Rela (mouse) mapping to 19 A.

SOURCE

p-NFκB p65 (49.Ser 311) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 311 phosphorylated NFκB p65 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-135769 X, 200 µg/0.1 ml.

p-NFκB p65 (49.Ser 311) is available conjugated to agarose (sc-135769 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-135769 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

STORAGE

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

APPLICATIONS

p-NFκB p65 (49.Ser 311) is recommended for detection of Ser 311 phosphorylated NFκB p65 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

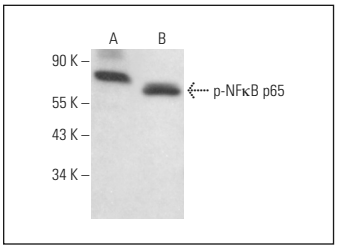
Suitable for use as control antibody for NFκB p65 siRNA (h): sc-29410, NFκB p65 siRNA (m): sc-29411, NFκB p65 siRNA (r): sc-61876, NFκB p65 shRNA Plasmid (h): sc-29410-SH, NFκB p65 shRNA Plasmid (m): sc-29411-SH, NFκB p65 shRNA Plasmid (r): sc-61876-SH, NFκB p65 shRNA (h) Lentiviral Particles: sc-29410-V, NFκB p65 shRNA (m) Lentiviral Particles: sc-29411-V and NFκB p65 shRNA (r) Lentiviral Particles: sc-61876-V.

p-NFκB p65 (49.Ser 311) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

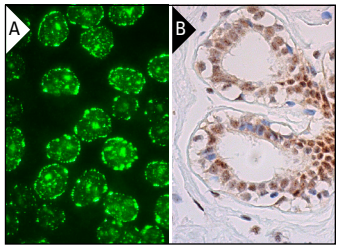
Molecular Weight of p-NFκB p65: 65 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, AT3B-1 whole cell lysate: sc-364372 or K-562 whole cell lysate: sc-2203.

DATA



p-NFκB p65 (49.Ser 311): sc-135769. Western blot analysis of NFκB p65 phosphorylation in NIH/3T3 (**A**) and AT3B-1 (**B**) whole cell lysates.



p-NFκB p65 (49.Ser 311): sc-135769. Immunofluorescence staining of methanol-fixed HeLa cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells and myoepithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Palozza, P., et al. 2010. Lycopene induces cell growth inhibition by altering mevalonate pathway and Ras signaling in cancer cell lines. Carcinogenesis 31: 1813-1821.
2. Odaira, T., et al. 2019. Mechanisms underpinning AMP-activated protein kinase-related effects on behavior and hippocampal neurogenesis in an animal model of depression. Neuropharmacology 150: 121-133.
3. Meng, S., et al. 2020. Effect of TLR2 on the proliferation of inflammation-related colorectal cancer and sporadic colorectal cancer. Cancer Cell Int. 20: 95.

RESEARCH USE

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