SANTA CRUZ BIOTECHNOLOGY, INC.

NFRκB (N-12): sc-109339

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NFκB (nuclear factor κB) is a ubiquitously expressed transcriptional regulator that, when stimulated, can activate transcription of several genes encoding proteins involved in cell cycle control, cell adhesion and programmed cell death. NFRκB (nuclear factor related to κB-binding protein), also known as DNA-binding protein R κB, is a nuclear protein that binds to the DNA consensus sequence 5'-GGGGAATCTCC-3' of NFκB. Binding of NFRκB is thought to regulate IL-2Rα (interleukin-2 receptor α chain) gene expression, a critical step in T cell activation. NFRκB exists as three isoforms due to alternative splicing and is expressed primarily in the brain, liver, spleen, testis and thymus. NFRκB gene expression is amplified in acute myeloid leukemia, suggesting a possible role in carcinogenesis.

REFERENCES

1. Adams, B.S., Leung, K., Meltzer, P.S., Lewis, K.A., Wagner-McPherson, C., Evans, G.A. and Nabel, G.J. 1992. Localization of the gene encoding R κB (NFRKB), a tissue-specific DNA binding protein, to chromosome 11q24-q25. Genomics 14: 270-274.
2. Adams, B.S., Leung, K.Y., Hanley, E.W. and Nabel, G.J. 1992. Cloning of R κB, a novel DNA-binding protein that recognizes the interleukin-2 receptor α chain κB site. New Biol. 3: 1063-1073.
3. Crossen, P.E., Morrison, M.J., Rodley, P., Cochrane, J. and Morris, C.M. 1999. Identification of amplified genes in a patient with acute myeloid leukemia and double minute chromosomes. Cancer Genet. Cytogenet. 113: 126-133.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 164013. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Tyybäkinoja, A., Saarinen-Pihkala, U., Elonen, E. and Knuutila, S. 2006. Amplified, lost, and fused genes in 11q23-25 amplicon in acute myeloid leukemia, an array-CGH study. Genes Chromosomes Cancer 45: 257-264.
6. Natarajan, M., Nayak, B.K., Galindo, C., Mathur, S.P., Roldan, F.N. and Meltz, M.L. 2006. Nuclear translocation and DNA-binding activity of NFKB (NFκB) after exposure of human monocytes to pulsed ultra-wideband electromagnetic fields (1 kV/cm) fails to transactivate κB-dependent gene expression. Radiat. Res. 165: 645-654.
7. Joshi, N., Johnson, L.L., Wei, W.Q., Abnet, C.C., Dong, Z.W., Taylor, P.R., Limburg, P.J., Dawsey, S.M., Hawk, E.T., Qiao, Y.L. and Kirsch, I.R. 2006. Gene expression differences in normal esophageal mucosa associated with regression and progression of mild and moderate squamous dysplasia in a high-risk Chinese population. Cancer Res. 66: 6851-6860.
8. Sun, X.F. and Zhang, H. 2007. NFκB and NFκBI polymorphisms in relation to susceptibility of tumour and other diseases. Histol. Histopathol. 22: 1387-1398.

CHROMOSOMAL LOCATION

Genetic locus: NFRKB (human) mapping to 11q24.3; Nfrkb (mouse) mapping to 9 A4.

SOURCE

NFRκB (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NFRκB of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109339 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-109339 X, 200 µg/0.1 ml.

APPLICATIONS

NFRκB (N-12) is recommended for detection of NFRκB 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NFRκB (N-12) is also recommended for detection of NFRκB in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for NFRκB siRNA (h): sc-96360, NFRκB siRNA (m): sc-149945, NFRκB shRNA Plasmid (h): sc-96360-SH, NFRκB shRNA Plasmid (m): sc-149945-SH, NFRκB shRNA (h) Lentiviral Particles: sc-96360-V and NFRκB shRNA (m) Lentiviral Particles: sc-149945-V.

NFRκB (N-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NFRκB: 139 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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