SANTA CRUZ BIOTECHNOLOGY, INC.

NFκB p50 (120-239): sc-4432 WB

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 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 50 kDa 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 amino terminus and a C-terminal region that when expressed as a separate molecule, designated PdI, binds to p50 and regulates its activity.

REFERENCES

1. Meyer, R., Hatada, E.N., Hohmann, H., Haiker, M., Bartsch, C., Rothlisberger, U., Lahm, H., Schlaeger, E.J., Van Loon, A.P.G.M., and Scheidereit, C. 1991. Cloning of the DNA-binding subunit of human NFκB: 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. Davis, N., Ghosh, S., Simmons, D.L., Tempst, P., Liou, H., Baltimore, D., and Bose, H.R. 1991. Rel-associated pp40: an inhibitor of the Rel family of transcription factors. Science 253: 1268-1271.
3. Schmid, R.M., Perkins, N.D., Duckett, C.S., Andrews, P.C., and Nabel, G.J. 1991. Cloning of an NFκB subunit which stimulates HIV transcription in synergy with p65. Nature 352: 733-736.
4. Ballard, D.W., Dixon, E.P., Peffer, N.J., Bogerd, H., Doerre, S., Stein, B., and Green, W.C. 1992. The 65 kDa subunit of human NFκB functions as a potent transcriptional activator and a target for v-Rel-mediated repression. Proc. Natl. Acad. Sci. USA 89: 1875-1879.
5. Hatada, E.N., Nieters, A., Wulczyn, F.G., Naumann, M., Meyer, R., Nucifora, G., McKeithan, T.W., and Scheidereit, C. 1992. The ankyrin repeat domains of the NFκB precursor p105 and the proto-oncogene Bcl-3 act as specific inhibitors of NFκB DNA binding. Proc. Natl. Acad. Sci. USA 89: 2489-2493.
6. Henkel, T., Zable, U., van Zee, K., Müller, J.M., Fanning, E., and Baeuerle, P.A. 1992. Intramolecular masking of the nuclear location signal and dimerization domain in the precursor for the p50 NFκB subunit. Cell 69: 1121-1133.
7. Ryseck, R., et al. 1992. RelB, a new rel family transcription activator that can interact with p50-NFκB. Mol. Cell. Biol. 12: 674-684.

SOURCE

NFκB p50 (120-239) is expressed in *E. coli* as a 40 kDa tagged fusion protein corresponding to amino acids 120-239 of NFκB of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

NFκB p50 (120-239) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

NFκB p50 (120-239) is suitable as a Western blotting control for sc-7178 and sc-8414.

RESEARCH USE

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