SANTA CRUZ BIOTECHNOLOGY, INC.

c-Rel (1-300): sc-4030



BACKGROUND

c-Rel is the cellular cognate of v-Rel, the avian reticuloendotheliosis virus strain T transforming gene. v-Rel encodes a phosphoprotein that is located in the cytoplasm of transformed spleen cells and in the nucleus of non-transformed fibroblasts, in contrast to the c-Rel protein, which is cytoplasmic. c-Rel has been shown to represent a constituent of the κB site binding transcription factor NF κB , which plays a crucial role in the expression of immuno-globulin κ light chain gene. In contrast to c-Rel, v-Rel is truncated in its C-terminal transactivation domain and does not appear to function as a transcriptional transactivator. It has thus been postulated that v-Rel may interfere with the normal transcription of NF κB regulated genes and thus cause transformation by a mechanism analogous to v-ErbA, which binds to the thyroid hormone-responsive region in certain erythroid genes needed for differentiation, but cannot be activated by thyroid hormone.

REFERENCES

- 1. Theilen, G., Zeigel, R. and Tweihaus, M. 1966. Biological studies with RE virus (strain T) that induces reticuloendotheliosis in turkeys, chickens, and Japanese quail. J. Natl. Cancer Inst. 37: 747-749.
- 2. Franklin, R.B., Maldonado, R.L. and Bose, H.R. 1974. Intervirology 3: 342-352.
- Gilmore, T.D. and Temin, H.M. 1986. Different localization of the product of the v- Rel oncogene in chicken fibroblasts and spleen cells correlates with transformation by REV-T. Cell 44: 791-800.
- Sassone-Corsi, P., Sisson, J.C. and Verma, I.M. 1988. Transcriptional autoregulation of the proto-oncogene Fos. Nature 334: 314-319.
- Hannink, M. and Temin, H.M. 1989. Transactivation of gene expression by nuclear and cytoplasmic Rel proteins. Mol. Cell. Biol. 9: 4323-4336.
- Ghosh, S., Gifford, A.M., Riviere, L.R., Tempst, P., Nolan, G.P. and Baltimore, D. 1990. Cloning of the p50 DNA binding subunit of NFκB: Homology to Rel and Dorsal. Cell 62: 1019-1029.
- Bull, P., Morley, K.L., Hoekstra, M.F., Hunter, T. and Verma, I.M. 1990. The mouse c-Rel protein has an N-terminal regulatory domain and a C-terminal transcriptional transactivation domain. Mol. Cell. Biol. 10: 5473-5485.
- Inoue, J., Kerr, L.D., Ransone, L.J., Bengal, E., Hunter, T. and Verma, I.M. 1991. c-Rel activates but v- Rel suppresses transcription from κB sites. Proc. Natl. Acad. Sci. USA 88: 3715-3719.

SOURCE

c-Rel (1-300) is expressed in *E. coli* as a 61 kDa tagged fusion protein corresponding to amino acids 1-300 mapping at the amino terminus of c-Rel p75 of human origin.

STORAGE

Store c-Rel (1-300): sc-4030 and sc-4030 WB at -20° C and c-Rel (1-300) AC: sc-4030 AC at 4° C; stable for one year from the date of shipment.

RESEARCH USE

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

PRODUCT

c-Rel (1-300) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography and supplied as 50 μ g purified protein in PBS containing 5 mM DTT and 50% glycerol.

Also available in agarose conjugate form; 100 µg purified protein conjugated to 0.1 ml agarose in PBS containing 0.1% azide, 0.1% BSA and 10% glycerol: c-Rel (1-300) AC: sc-4030 AC.

Available as a Western blotting control; supplied as $10 \ \mu g$ protein in 0.1 ml SDS-PAGE loading buffer, c-Rel (1-300): sc-4030 WB.

APPLICATIONS

c-Rel (1-300): sc-4030 WB is recommended as a Western blotting control for sc-70, sc-272 and sc-6955.

The agarose conjugate (sc-4030 AC) is suitable for coprecipitation and affinity-purification of c-Rel p75 and NF κ B p65 associated proteins.

Molecular Weight of c-Rel: 75 kDa.

SELECT PRODUCT CITATIONS

1. Luhm, J., Langenkamp, U., Hensel, J., Frohn, C., Brand, J.M., Hennig, H., Rink, L., Koritke, P., Wittkopf, N., Williams, D.L and Mueller, A. 2006. β -(1 \rightarrow 3)-D-glucan modulates DNA binding of nuclear factors κ B, AT and IL-6 leading to an anti-inflammatory shift of the IL-1 β /IL-1 receptor antagonist ratio. BMC Immunol. 7: 5.

PROTOCOLS

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