SANTA CRUZ BIOTECHNOLOGY, INC.

RelB siRNA (h): sc-36402

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The Power to Question

BACKGROUND

The NFκB transcription factor was originally identified as a protein complex consisting of a DNA binding subunit and an associated protein. The DNA binding subunit is functionally related to c-Rel p75 and Rel B p68. The p50 subunit was initially believed to be a functionally unique protein derived from the amino terminus of a precursor designated p105. A second protein designated p52 (previously referred to as p49) has been identified that can act as an alternative NFκB subunit. Rel B does not bind with high affinity to NFκB sites, but heterodimers between Rel B and p50 bind with an affinity comparable to that of p50 NFκB homodimers. However, Rel B/p50 heterodimers, in contrast to NFκB heterodimers, transactivates transcription of promotors containing κB binding sites.

CHROMOSOMAL LOCATION

Genetic locus: RELB (human) mapping to 19q13.32.

PRODUCT

RelB siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RelB shRNA Plasmid (h): sc-36402-SH and RelB shRNA (h) Lentiviral Particles: sc-36402-V as alternate gene silencing products.

For independent verification of RelB (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-36402A, sc-36402B and sc-36402C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

RelB siRNA (h) is recommended for the inhibition of RelB expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

RelB (D-4): sc-48366 is recommended as a control antibody for monitoring of RelB gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor RelB gene expression knockdown using RT-PCR Primer: RelB (h)-PR: sc-36402-PR (20 µl, 392 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

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4. Wang, J., et al. 2010. Bovine foamy virus transactivator BTas interacts with cellular RelB to enhance viral transcription. J. Virol. 84: 11888-11897.
5. Holley, A.K., et al. 2010. RelB regulates manganese superoxide dismutase gene and resistance to ionizing radiation of prostate cancer cells. Ann. N.Y. Acad. Sci. 1201: 129-136.
6. Guo, F., et al. 2011. Maspin expression is regulated by the non-canonical NFκB subunit in androgen-insensitive prostate cancer cell lines. Mol. Immunol. 49: 8-17.
7. Xu, Y., et al. 2012. Inverse relationship between PSA and IL-8 in prostate cancer: an insight into a NFκB-mediated mechanism. PLoS ONE 7: e32905.
8. Matlaf, L.A., et al. 2013. Cytomegalovirus pp71 protein is expressed in human glioblastoma and promotes pro-angiogenic signaling by activation of stem cell factor. PLoS ONE 8: e68176.
9. Sheridan, J.A., et al. 2015. Decreased expression of the NFκB family member RelB in lung fibroblasts from smokers with and without COPD potentiates cigarette smoke-induced Cox-2 expression. Respir. Res. 16: 54.
10. Emma, M.R., et al. 2016. NUPR1, a new target in liver cancer: implication in controlling cell growth, migration, invasion and sorafenib resistance. Cell Death Dis. 7: e2269.
11. Zago, M., et al. 2017. Low levels of the AhR in chronic obstructive pulmonary disease (COPD)-derived lung cells increases Cox-2 protein by altering mRNA stability. PLoS ONE 12: e0180881.

RESEARCH USE

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