



c-Rel siRNA (m): sc-29858

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 κ B site binding transcription factor NF κ B, which plays a crucial role in the expression of immunoglobulin 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 κ B 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., et al. 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., et al. 1974. Isolation and characterization of reticuloendotheliosis virus transformed bone marrow cells. *Intervirology* 3: 342-352.
3. Gilmore, T.D., et al. 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.
4. Sassone-Corsi, P., et al. 1988. Transcriptional autoregulation of the proto-oncogene fos. *Nature* 334: 314-319.

CHROMOSOMAL LOCATION

Genetic locus: Rel (mouse) mapping to 11 A3.2.

PRODUCT

c-Rel siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see c-Rel shRNA Plasmid (m): sc-29858-SH and c-Rel shRNA (m) Lentiviral Particles: sc-29858-V as alternate gene silencing products.

For independent verification of c-Rel (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29858A, sc-29858B and sc-29858C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

c-Rel siRNA (m) is recommended for the inhibition of c-Rel expression in mouse 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 μ M in 66 μ l. 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

c-Rel (B-6): sc-6955 is recommended as a control antibody for monitoring of c-Rel 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor c-Rel gene expression knockdown using RT-PCR Primer: c-Rel (m)-PR: sc-29858-PR (20 μ l, 600 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Guha, M., et al. 2009. Heterogeneous nuclear ribonucleoprotein A2 is a common transcriptional coactivator in the nuclear transcription response to mitochondrial respiratory stress. *Mol. Biol. Cell* 20: 4107-4119.
2. Lee, D.K., et al. 2015. Lipopolysaccharide induction of REDD1 is mediated by two distinct CREB-dependent mechanisms in macrophages. *FEBS Lett.* 589: 2859-2865.

RESEARCH USE

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

PROTOCOLS

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