

RelB siRNA (m): sc-36403

BACKGROUND

The NF κ B 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 NF κ B subunit. Rel B does not bind with high affinity to NF κ B sites, but heterodimers between Rel B and p50 bind with an affinity comparable to that of p50 NF κ B homodimers. However, Rel B/p50 heterodimers, in contrast to NF κ B heterodimers, transactivates transcription of promoters containing κ B binding sites.

REFERENCES

1. Sen, R., et al. 1986. Multiple nuclear factors interact with the immunoglobulin enhancer sequences. *Cell* 46: 705-716.
2. Baeuerle, P.A., et al. 1989. A 65 kDa subunit of active NF κ B is required for inhibition of NF κ B by I κ B. *Genes Dev.* 3: 1689-1698.
3. Gilmore, T. 1990. NF κ B, K β I Dorsal and related matters. *Cell* 62: 841-843.
4. Ghosh, S., et al. 1990. Cloning of the p50 DNA binding subunit of NF κ B: homology to Rel and Dorsal. *Cell* 62: 1019-1029.
5. Bours, V., et al. 1990. Cloning of a mitogen-inducible gene encoding a κ B DNA-binding protein with homology to the Rel oncogene and to cell cycle motifs. *Nature* 348: 76-80.
6. Schmid, R.M., et al. 1991. Cloning of an NF κ B subunit which stimulates HIV transcription in synergy with p65. *Nature* 352: 733-736.

CHROMOSOMAL LOCATION

Genetic locus: Relb (mouse) mapping to 7 A3.

PRODUCT

RelB 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 RelB shRNA Plasmid (m): sc-36403-SH and RelB shRNA (m) Lentiviral Particles: sc-36403-V as alternate gene silencing products.

For independent verification of RelB (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-36403A, sc-36403B and sc-36403C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$ C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$ 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

RelB siRNA (m) is recommended for the inhibition of RelB 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

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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-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 κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (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 RelB gene expression knockdown using RT-PCR Primer: RelB (m)-PR: sc-36403-PR (20 μ l, 464 bp). Annealing temperature for the primers should be 55-60 $^{\circ}$ C and the extension temperature should be 68-72 $^{\circ}$ C.

SELECT PRODUCT CITATIONS

1. Su, J., et al. 2009. The interleukin-1 receptor-associated kinase M selectively inhibits the alternative, instead of the classical NF κ B pathway. *J. Innate Immun.* 1: 164-174.
2. Lu, M., et al. 2017. RelB attenuates cigarette smoke extract-induced apoptosis in association with transcriptional regulation of the aryl hydrocarbon receptor. *Free Radic. Biol. Med.* 108: 19-31.

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.