SANTA CRUZ BIOTECHNOLOGY, INC.

NRBF2 siRNA (h): sc-90694

BACKGROUND

Nuclear hormone receptors function as transcriptional activators when their cognate ligands are bound. Binding of the appropriate ligand induces a conformational change in the nuclear receptor, allowing it to interact with transcriptional coactivators. NRBF2 (nuclear receptor-binding factor 2), also known as COPR (comodulator of PPAR and RXR), is thought to act as a transcriptional coactivator by altering the activity of target nuclear receptors. Highly expressed in the liver, placenta and keratinocytes, NRBF2 can interact with at least seven nuclear receptors including PPARα, PPARδ and PPARγ. In the presence of a bound ligand, NRBF2 can interact with nuclear receptors RARα, RARγ and RXRα. NRBF2, which exists as two isoforms due to alternative splicing, is localized to both the nucleus and the cytoplasm.

REFERENCES

1. Heery, D.M., Kalkhoven, E., Hoare, S. and Parker, M.G. 1997. A signature motif in transcriptional co-activators mediates binding to nuclear receptors. Nature 387: 733-736.
2. Yasumo, H., Masuda, N., Furusawa, T., Tsukamoto, T., Sadano, H. and Osumi, T. 2000. Nuclear receptor binding factor-2 (NRBF-2), a possible gene activator protein interacting with nuclear hormone receptors. Biochim. Biophys. Acta 1490: 189-197.
3. Ciarlo, J.D., Flores, A.M., McHugh, N.G. and Aneskievich, B.J. 2004. FHL2 expression in keratinocytes and transcriptional effect on PPARα/RXRα. J. Dermatol. Sci. 35: 61-63.
4. Flores, A.M., Li, L. and Aneskievich, B.J. 2004. Isolation and functional analysis of a keratinocyte-derived, ligand-regulated nuclear receptor comodulator. J. Invest. Dermatol. 123: 1092-1101.
5. Flores, A.M., Li, L., McHugh, N.G. and Aneskievich, B.J. 2005. Enzyme association with PPARγ: evidence of a new role for 15-lipoxygenase type 2. Chem. Biol. Interact. 151: 121-132.

CHROMOSOMAL LOCATION

Genetic locus: NRBF2 (human) mapping to 10q21.3.

PRODUCT

NRBF2 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 NRBF2 shRNA Plasmid (h): sc-90694-SH and NRBF2 shRNA (h) Lentiviral Particles: sc-90694-V as alternate gene silencing products.

For independent verification of NRBF2 (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-90694A, sc-90694B and sc-90694C.

PROTOCOLS

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

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

NRBF2 siRNA (h) is recommended for the inhibition of NRBF2 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

NRBF2 (D-3): sc-365213 is recommended as a control antibody for monitoring of NRBF2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 NRBF2 gene expression knockdown using RT-PCR Primer: NRBF2 (h)-PR: sc-90694-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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