SANTA CRUZ BIOTECHNOLOGY, INC.

NRBP siRNA (m): sc-61232

BACKGROUND

The nuclear receptor binding protein (NRBP) is a host cellular protein that influences the subcellular trafficking between the endoplasmic reticulum (ER) and the Golgi apparatus via interactions with GTPases. As a multidomain putative adaptor protein, NRBP modulates multiple signaling pathways by regulating the formation of signaling complexes in the cytoplasm. NRBP, which can form a homodimer, binds to MLF1. This binding recruits a serine kinase which phosphorylates both of the proteins, preventing MLF1 from binding to YWHAZ. It is a cytoplasmic protein, but it can co-localize with RAC 3 to the endomembrane and can be seen at the cell periphery in lamellipodia. The NRBP gene maps to human chromosome 2p23.3 and is ubiquitously expressed in human tissues, with highest levels detected in testis.

REFERENCES

1. Hooper, J.D., Baker, E., Ogbourne, S.M., Sutherland, G.R. and Antalis, T.M. 2000. Cloning expressed, multidomain putative adapter protein. Genomics 66: 113-118.
2. De Langhe, S., Haataja, L., Senadheera, D., Groffen, J. and Heisterkamp, N. 2002. Interaction of the small GTPase Rac 3 with NRBP, a protein with a kinase-homology domain. Int. J. Mol. Med. 9: 451-459.
3. Chua, J.J., Ng, M.M. and Chow, V.T. 2004. The non-structural 3 (NS3) protein of dengue virus type 2 interacts with human nuclear receptor binding protein and is associated with alterations in membrane structure. Virus Res. 102: 151-163.

CHROMOSOMAL LOCATION

Genetic locus: Nrbp1 (mouse) mapping to 5 B1.

PRODUCT

NRBP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NRBP shRNA Plasmid (m): sc-61232-SH and NRBP shRNA (m) Lentiviral Particles: sc-61232-V as alternate gene silencing products.

For independent verification of NRBP (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-61232A, sc-61232B and sc-61232C.

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.

RESEARCH USE

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

APPLICATIONS

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

NRBP (C-1): sc-390087 is recommended as a control antibody for monitoring of NRBP 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 NRBP gene expression knockdown using RT-PCR Primer: NRBP (m)-PR: sc-61232-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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