SANTA CRUZ BIOTECHNOLOGY, INC.

CENP-R siRNA (h): sc-72862

BACKGROUND

CENP-R (centromere protein R), also known as CENPR, ITGB3BP (Integrin β3 binding protein), β3-endonexin, NRIF3 (nuclear receptor-interacting factor 3) or TAP20, is a widely expressed protein that contains a DD1 or RepD1 domain and an LXXLL motif. Induced by estrogen, CENP-R is believed to function as a nuclear receptor coactivator. It also associates with the CENP-A-CAD complex which is involved in mitotic progression, the assembly of kinetochore proteins and chromosome segregation. A number of isoforms exist for CENP-R due to alternative splicing events. Isoform 1 localizes to the nucleus at the centromere; isoform 2, also known as EnL, En-L or long isoform, localizes to the nucleus; isoform 3, also known as EnS, En-S or short isoform, localizes predominantly to the nucleus but can also be found in the cytoplasm; and isoform 4 predominantly localizes to the cytoplasm. Isoform 3 of CENP-R binds to the cytoplasmic tail of Integrin β3 and can activate Integrin αIIb/β3.

REFERENCES

1. Li, D., et al. 2001. Domain structure of the NRIF3 family of coregulators suggests potential dual roles in transcriptional regulation. Mol. Cell. Biol. 21: 8371-8384.
2. Besta, F., et al. 2002. Role of β3-endonexin in the regulation of NFκB-dependent expression of urokinase-type plasminogen activator receptor. J. Cell Sci. 115: 3879-3888.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605494. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Li, D., et al. 2004. The NRIF3 family of transcriptional coregulators induces rapid and profound apoptosis in breast cancer cells. Mol. Cell. Biol. 24: 3838-3848.
5. Talukder, A.H., et al. 2004. Metastasis-associated protein 1 interacts with NRIF3, an estrogen-inducible nuclear receptor coregulator. Mol. Cell. Biol. 24: 6581-6591.
6. Okada, M., et al. 2006. The CENP-H-I complex is required for the efficient incorporation of newly synthesized CENP-A into centromeres. Nat. Cell Biol. 8: 446-457.

CHROMOSOMAL LOCATION

Genetic locus: ITGB3BP (human) mapping to 1p31.3.

PRODUCT

CENP-R 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 CENP-R shRNA Plasmid (h): sc-72862-SH and CENP-R shRNA (h) Lentiviral Particles: sc-72862-V as alternate gene silencing products.

For independent verification of CENP-R (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-72862A, sc-72862B and sc-72862C.

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

CENP-R siRNA (h) is recommended for the inhibition of CENP-R 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

CENP-R (G-78): sc-101092 is recommended as a control antibody for monitoring of CENP-R 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 CENP-R gene expression knockdown using RT-PCR Primer: CENP-R (h)-PR: sc-72862-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.

PROTOCOLS

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