SANTA CRUZ BIOTECHNOLOGY, INC.

hnRNP E3 siRNA (h): sc-105534

BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing, as well as mature mRNA transport to the cytoplasm and, ultimately, translation. They also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II (Pol II). There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP protein components are localized to the nucleus, however some shuttle between the nucleus and the cytoplasm. hnRNP E3, also known as PCBP3 (poly(rC)-binding protein 3) or αCP3, is a 339 amino acid protein that localizes to the cytoplasm and contains three KH domains. Expressed as multiple alternatively spliced isoforms, hnRNP E3 functions as a single-stranded nucleic acid binding protein that binds to oligo dC and plays a role in various post-transcriptional activities.

REFERENCES

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3. Makeyev, A.V. and Liebhaber, S.A. 2002. The poly(C)-binding proteins: a multiplicity of functions and a search for mechanisms. RNA 8: 265-278.
4. Makeyev, A.V., et al. 2002. Targeting a KH-domain protein with RNA decoys. RNA 8: 1160-1173.
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6. Hirano, M. and Noda, T. 2004. Genomic organization of the mouse MSH4 gene producing bicistronic, chimeric and antisense mRNA. Gene 342: 165-177.
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CHROMOSOMAL LOCATION

Genetic locus: PCBP3 (human) mapping to 21q22.3.

PRODUCT

hnRNP E3 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 hnRNP E3 shRNA Plasmid (h): sc-105534-SH and hnRNP E3 shRNA (h) Lentiviral Particles: sc-105534-V as alternate gene silencing products.

For independent verification of hnRNP E3 (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-105534A, sc-105534B and sc-105534C.

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

hnRNP E3 siRNA (h) is recommended for the inhibition of hnRNP E3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor hnRNP E3 gene expression knockdown using RT-PCR Primer: hnRNP E3 (h)-PR: sc-105534-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.