

# EXOSC8 siRNA (h): sc-105341

## BACKGROUND

The exosome is a multisubunit complex of 3' to 5' exoribonucleases. It is involved in a variety of cellular processes and is responsible for degrading unstable mRNAs that contain AU-rich elements in their untranslated 3' region. EXOSC8 (exosome component 8), also known as p9, CIP3 (CBP-interacting protein 3), EAP2, OIP2 (opa-interacting protein 2), RRP43 (ribosomal RNA-processing protein 43) or Rrp43p, is a component of the exosome multienzyme ribonuclease complex. It belongs to the RNase PH family and localizes to the nucleolus. EXOSC8 is one of the six RNase-PH domain subunits of the exosome. Together, these six subunits form a PNPase-like ring. EXOSC8 is required for the processing of the 7S pre-RNA. In addition to its numerous interactions with other proteins, EXOSC8 can also interact with itself.

## REFERENCES

1. Williams, J.M., et al. 1998. Using the yeast two-hybrid system to identify human epithelial cell proteins that bind gonococcal Opa proteins: intracellular gonococci bind pyruvate kinase via their Opa proteins and require host pyruvate for growth. *Mol. Microbiol.* 27: 171-186.
2. Chen, C.Y., et al. 2001. AU binding proteins recruit the exosome to degrade ARE-containing mRNAs. *Cell* 107: 451-464.
3. Raijmakers, R., et al. 2002. Protein-protein interactions between human exosome components support the assembly of RNase PH-type subunits into a six-membered PNPase-like ring. *J. Mol. Biol.* 323: 653-663.
4. Jiang, T., et al. 2002. A protein subunit of human RNase P, Rpp14, and its interacting partner, OIP2, have 3'→5' exoribonuclease activity. *Proc. Natl. Acad. Sci. USA* 99: 5295-5300.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606019. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Lehner, B., et al. 2004. A protein interaction framework for human mRNA degradation. *Genome Res.* 14: 1315-1323.

## CHROMOSOMAL LOCATION

Genetic locus: EXOSC8 (human) mapping to 13q13.3.

## PRODUCT

EXOSC8 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EXOSC8 shRNA Plasmid (h): sc-105341-SH and EXOSC8 shRNA (h) Lentiviral Particles: sc-105341-V as alternate gene silencing products.

For independent verification of EXOSC8 (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-105341A, sc-105341B and sc-105341C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

EXOSC8 siRNA (h) is recommended for the inhibition of EXOSC8 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  $\mu$ M in 66  $\mu$ 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

EXOSC8 (H-8): sc-393027 is recommended as a control antibody for monitoring of EXOSC8 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor EXOSC8 gene expression knockdown using RT-PCR Primer: EXOSC8 (h)-PR: sc-105341-PR (20  $\mu$ l). 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.