SANTA CRUZ BIOTECHNOLOGY, INC.

PSMC6 siRNA (h): sc-92282

BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by their ubiquitination and subsequent degradation by the 26S Proteasome. The 26S Proteasome is a protease complex that selectively breaks down proteins that have been modified by polyubiquitin chains. It is made up of two multi-subunit complexes: the 20S Proteasome chamber, which serves as the proteolytic core of the complex, and two 19S regulatory particles which recognize and unfold ubiquitinated proteins. PSMC6 (proteasome (prosome, macropain) 26S subunit, ATPase 6), also known as P44, p42, SUG2, S10B or CADP44, is a regulatory component of the 26S Proteasome. More specifically, PSMC6 is one of the six ATPase subunits of the 19S regulator base. It contains a leucine zipper motif and an AAA (ATPase associated with diverse cellular activities) domain and belongs to the AAA ATPase family of chaperone-like ATPases.

REFERENCES

1. Bauer, V.W., et al. 1996. CADp44: a novel regulatory subunit of the 26S Proteasome and the mammalian homolog of yeast Sug2p. Gene 181: 63-69.
2. Fujiwara, T., et al. 1996. cDNA cloning of p42, a shared subunit of two proteasome regulatory proteins, reveals a novel member of the AAA protein family. FEBS Lett. 387: 184-188.
3. DeMartino, G.N., et al. 1996. Identification, purification, and characterization of a PA700-dependent activator of the prote-asome. J. Biol. Chem. 271: 3112-3118.
4. Tanahashi, N., et al. 1998. Chromosomal localization and immunological analysis of a family of human 26S proteasomal ATPases. Biochem. Biophys. Res. Commun. 243: 229-232.
5. Hastings, R.A., et al. 1999. A 220-kDa activator complex of the 26S Proteasome in insects and humans. A role in type II programmed insect muscle cell death and cross-activation of proteasomes from different species. J. Biol. Chem. 274: 25691-25700.

CHROMOSOMAL LOCATION

Genetic locus: PSMC6 (human) mapping to 14q22.1.

PRODUCT

PSMC6 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 PSMC6 shRNA Plasmid (h): sc-92282-SH and PSMC6 shRNA (h) Lentiviral Particles: sc-92282-V as alternate gene silencing products.

For independent verification of PSMC6 (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-92282A, sc-92282B and sc-92282C.

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

PSMC6 siRNA (h) is recommended for the inhibition of PSMC6 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

PSMC6 (34-Q): sc-100465 is recommended as a control antibody for monitoring of PSMC6 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 PSMC6 gene expression knockdown using RT-PCR Primer: PSMC6 (h)-PR: sc-92282-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.