

PRPF18 siRNA (m): sc-152492

BACKGROUND

PRPF18 (pre-mRNA-splicing factor 18), also known as HPRP18, is a 342 amino acid protein that localizes to nuclear speckles and plays a role in the second step of pre-mRNA splicing. A member of the PRP18 family, PRPF18 contains seven WD repeats and exists as two alternatively spliced isoforms which are encoded by a gene located on human chromosome 10p13. Chromosome 10 contains over 800 genes and 135 million nucleotides. PTEN is an important tumor suppressor gene located on chromosome 10 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome. Other chromosome 10 associated disorders include Cockayne syndrome, tetrahydrobiopterin deficiency and trisomy 10.

REFERENCES

1. Troelstra, C., Landsvater, R.M., Wiegant, J., van der Ploeg, M., Viel, G., Buys, C.H. and Hoeijmakers, J.H. 1992. Localization of the nucleotide excision repair gene ERCC6 to human chromosome 10q11-q21. *Genomics* 12: 745-749.
2. Horowitz, D.S. and Krainer, A.R. 1997. A human protein required for the second step of pre-mRNA splicing is functionally related to a yeast splicing factor. *Genes Dev.* 11: 139-151.
3. Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
4. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.
5. Laugel, V., Dalloz, C., Durand, M., Sauvanaud, F., Kristensen, U., Vincent, M.C., Pasquier, L., Odent, S., Cormier-Daire, V., Gener, B., Tobias, E.S., Tolmie, J.L., Martin-Coignard, D., Drouin-Garraud, V., Heron, D., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. *Hum. Mutat.* 31: 113-126.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 604993. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Prpf18 (mouse) mapping to 2 A1.

PRODUCT

PRPF18 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PRPF18 shRNA Plasmid (m): sc-152492-SH and PRPF18 shRNA (m) Lentiviral Particles: sc-152492-V as alternate gene silencing products.

For independent verification of PRPF18 (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-152492A, sc-152492B and sc-152492C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PRPF18 siRNA (m) is recommended for the inhibition of PRPF18 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 μ M in 66 μ 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

PRPF18 (52): sc-136529 is recommended as a control antibody for monitoring of PRPF18 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).

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 μ M in 66 μ 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PRPF18 gene expression knockdown using RT-PCR Primer: PRPF18 (m)-PR: sc-152492-PR (20 μ 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.