

Pregnancy Zone protein siRNA (h): sc-76239

BACKGROUND

Pregnancy Zone protein, also known as PZP or CPAMD6 (C3 and PZP-like α -2-macroglobulin domain-containing protein 6), is a 1,482 amino acid secreted protein that belongs to the protease inhibitor I39 family and exists as multiple alternatively spliced isoforms. Expressed predominately in plasma and in late-pregnancy sera, Pregnancy Zone protein functions as a disulfide-linked homotetramer that is able to trap and inhibit proteinases, thus playing a role in the regulation of protein splitting and small peptide formation. The gene encoding Pregnancy Zone protein maps to human chromosome 12p13.31, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Smithies, O. 1959. Zone electrophoresis in starch gels and its application to studies of serum proteins. *Adv. Protein Chem.* 14: 65-113.
2. Sottrup-Jensen, L., et al. 1984. Partial primary structure of human Pregnancy Zone protein: extensive sequence homology with human α 2-macroglobulin. *Proc. Natl. Acad. Sci. USA* 81: 7353-7357.
3. Sand, O., et al. 1985. Characterization of human Pregnancy Zone protein. Comparison with human α 2-macroglobulin. *J. Biol. Chem.* 260: 15723-15735.
4. Christensson, A., et al. 1990. Enzymatic activity of prostate-specific antigen and its reactions with extracellular serine proteinase inhibitors. *Eur. J. Biochem.* 194: 755-763.
5. Marynen, P., et al. 1990. A genetic polymorphism in a functional domain of human Pregnancy Zone protein: the bait region. Genomic structure of the bait domains of human Pregnancy Zone protein and α 2 macroglobulin. *FEBS Lett.* 262: 349-352.

CHROMOSOMAL LOCATION

Genetic locus: PZP (human) mapping to 12p13.31.

PRODUCT

Pregnancy Zone protein 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Pregnancy Zone protein shRNA Plasmid (h): sc-76239-SH and Pregnancy Zone protein shRNA (h) Lentiviral Particles: sc-76239-V as alternate gene silencing products.

For independent verification of Pregnancy Zone protein (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-76239A, sc-76239B and sc-76239C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

Pregnancy Zone protein siRNA (h) is recommended for the inhibition of Pregnancy Zone protein 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 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 Pregnancy Zone protein gene expression knockdown using RT-PCR Primer: Pregnancy Zone protein (h)-PR: sc-76239-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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