

SerpinB12 siRNA (h): sc-76477

BACKGROUND

The serine proteinase inhibitors (serpins) compose a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. SerpinB12 appears to be an inhibitor of trypsin-like serine proteinases, including mast cell tryptases.

REFERENCES

1. Askew, Y.S., et al. 2001. SerpinB12 is a novel member of the human ov-serpin family that is widely expressed and inhibits trypsin-like serine proteinases. *J. Biol. Chem.* 276: 49320-49330.
2. Gettins, P.G. 2002. Serpin structure, mechanism, and function. *Chem. Rev.* 102: 4751-4804.
3. Carrell, R.W., et al. 2003. How serpins change their fold for better and for worse. *Biochem. Soc. Symp.* 70: 163-178.
4. van Gent, D., et al. 2003. Serpins: structure, function and molecular evolution. *Int. J. Biochem. Cell Biol.* 35: 1536-1547.
5. Silverman, G.A., et al. 2004. Human clade B serpins (ov-serpins) belong to a cohort of evolutionarily dispersed intracellular proteinase inhibitor clades that protect cells from promiscuous proteolysis. *Cell. Mol. Life Sci.* 61: 301-325.
6. Kummer, J.A., et al. 2004. Production, characterization, and use of serpin antibodies. *Methods* 32:141-149.
7. Patston, P.A., et al. 2004. Serpin-ligand interactions. *Methods* 32: 93-109.
8. LocusLink Report (LocusID: 89777). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: SERPINB12 (human) mapping to 18q21.33.

PRODUCT

SerpinB12 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 SerpinB12 shRNA Plasmid (h): sc-76477-SH and SerpinB12 shRNA (h) Lentiviral Particles: sc-76477-V as alternate gene silencing products.

For independent verification of SerpinB12 (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-76477A, sc-76477B and sc-76477C.

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.

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

SerpinB12 siRNA (h) is recommended for the inhibition of SerpinB12 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.

GENE EXPRESSION MONITORING

SerpinB12 (H3-1B): sc-32234 is recommended as a control antibody for monitoring of SerpinB12 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 κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SerpinB12 gene expression knockdown using RT-PCR Primer: SerpinB12 (h)-PR: sc-76477-PR (20 μ l, 596 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.