



# Cyr61 siRNA (m): sc-39332

## BACKGROUND

Cyr61 is a secreted heparin binding protein, encoded by a growth factor-inducible immediate-early gene, that associates with the extracellular matrix and connective tissue. Cyr61 is a member of a distinct family of angiogenic and vasculogenic regulators designated CCN proteins, which includes connective tissue growth factor (CTGF) and the mouse Cyr61 homolog, Fisp12. As an angiogenic inducer, Cyr61 binds to the cell surface receptor Integrin  $\alpha_v\beta_3$ , where it then stimulates cell adhesion and migration and promotes DNA synthesis of human vascular endothelial cells. Expression of Cyr61 is elevated during vessel growth, wound healing and chondrocyte differentiation. Cyr61 is also detected in a wide variety of tumors as it induces tumor growth and functions as a marker of tumor progression.

## REFERENCES

1. O'Brien, T.P., et al. 1990. Expression of Cyr61, a growth factor-inducible immediate-early gene. *Mol. Cell. Biol.* 10: 3569-3577.
2. O'Brien, T.P., et al. 1992. Expression of the growth factor-inducible immediate early gene Cyr61 correlates with chondrogenesis during mouse embryonic development. *Cell Growth Differ.* 3: 645-654.
3. Martinerie, C., et al. 1997. Chromosomal mapping and expression of the human Cyr61 gene in tumour cells from the nervous system. *Mol. Pathol.* 50: 310-316.
4. Babic, A.M., et al. 1998. Cyr61, a product of a growth factor-inducible immediate early gene, promotes angiogenesis and tumor growth. *Proc. Natl. Acad. Sci. USA* 95: 6355-6360.

## CHROMOSOMAL LOCATION

Genetic locus: Cyr61 (mouse) mapping to 3 H2.

## PRODUCT

Cyr61 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Cyr61 shRNA Plasmid (m): sc-39332-SH and Cyr61 shRNA (m) Lentiviral Particles: sc-39332-V as alternate gene silencing products.

For independent verification of Cyr61 (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-39332A, sc-39332B and sc-39332C.

## 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

Cyr61 siRNA (m) is recommended for the inhibition of Cyr61 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  $\mu$ 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

Cyr61 (H-2): sc-271217 is recommended as a control antibody for monitoring of Cyr61 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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cyr61 gene expression knockdown using RT-PCR Primer: Cyr61 (m)-PR: sc-39332-PR (20  $\mu$ l, 509 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Hu, T., et al. 2018. Simvastatin inhibits inflammatory response in lipopolysaccharide (LPS)-stimulated RAW264.7 macrophages through the microRNA-22/Cyr61 axis. *Int. J. Clin. Exp. Pathol.* 11: 3925-3933.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.