

# CTRP6 siRNA (m): sc-142628

## BACKGROUND

Members of the CTRP (complement C1q tumor necrosis factor-related protein) family are structurally related, although functionally diverse. CTRPs share TNF  $\alpha$ -like globular domains and N-terminal glycine-X-Y repeats and also tend to form trimers that have the ability to congregate into higher order structures. Functions of this protein family range from immune homeostasis to structural and extracellular matrix-related roles. CTRP6 (complement C1q tumor necrosis factor-related protein 6) is a 259 amino acid secreted glycoprotein consisting of an N-terminal signal peptide sequence followed by a collagen-like domain and a C-terminal globular domain. Predominantly expressed in eye and placenta, CTRP6 is also upregulated in obese mice. Along with CTRP1, CTRP2, CTRP3 and CTRP5, CTRP6 circulates in the blood and is thought to function as an endocrine hormone. There are three isoforms of CTRP6 that are produced as a result of alternative splicing events.

## REFERENCES

1. Lasser, G., et al. 2006. C1qTNF-related protein-1 (CTRP-1): a vascular wall protein that inhibits collagen-induced platelet aggregation by blocking VWF binding to collagen. *Blood* 107: 423-430.
2. Kim, K.Y., et al. 2006. Tumor necrosis factor- $\alpha$  and interleukin-1 $\beta$  increases CTRP1 expression in adipose tissue. *FEBS Lett.* 580: 3953-3960.
3. Akiyama, H., et al. 2007. CTRP3/cartducin promotes proliferation and migration of endothelial cells. *Mol. Cell. Biochem.* 304: 243-248.
4. Wong, G.W., et al. 2008. Molecular, biochemical and functional characterizations of C1q/TNF family members: adipose-tissue-selective expression patterns, regulation by PPAR- $\gamma$  agonist, cysteine-mediated oligomerizations, combinatorial associations and metabolic functions. *Biochem. J.* 416: 161-177.
5. Wölfing, B., et al. 2008. Effects of the new C1q/TNF-related protein (CTRP-3) "cartonectin" on the adipocytic secretion of adipokines. *Obesity* 16: 1481-1486.
6. Jeon, J.H., et al. 2008. A novel adipokine CTRP1 stimulates aldosterone production. *FASEB J.* 22: 1502-1511.
7. Wong, G.W., et al. 2009. Identification and characterization of CTRP9, a novel secreted glycoprotein, from adipose tissue that reduces serum glucose in mice and forms heterotrimers with adiponectin. *FASEB J.* 23: 241-258.

## CHROMOSOMAL LOCATION

Genetic locus: C1qtnf6 (mouse) mapping to 15 E1.

## PRODUCT

CTRP6 siRNA (m) is a target-specific 19-25 nt siRNA 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 CTRP6 shRNA Plasmid (m): sc-142628-SH and CTRP6 shRNA (m) Lentiviral Particles: sc-142628-V as alternate gene silencing 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  $\mu$ 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

CTRP6 siRNA (m) is recommended for the inhibition of CTRP6 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CTRP6 gene expression knockdown using RT-PCR Primer: CTRP6 (m)-PR: sc-142628-PR (20  $\mu$ 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.

## PROTOCOLS

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