

CTRP9 siRNA (m): sc-142629

BACKGROUND

CTRP9 (C1q and tumor necrosis factor related protein 9), also known as C1QTNF9, C1QTNF9A or AQL1, is a 333 amino acid secretory protein containing one C1q domain and 3 collagen-like domains. CTRP9 is expressed primarily in adipose tissue and forms heterotrimeric complexes with ADIPOQ and heterotrimers and heterooligomeric complexes with CTRP9B. CTRP9 is thought to activate AMPK, AKT and p44/42 MAPK signaling pathways and is a probable adipokine. CTRP9 serum concentrations have been positively associated with favorable glucose or metabolic phenotypes and the absence of metabolic syndrome. CTRP9 serum concentration has also been associated with arterial stiffness in patients with type 2 diabetes, suggesting a regulatory role in arterial stiffness. The human CTRP9 gene is located on chromosome 13 and is conserved in chimpanzee, Rhesus monkey, and zebrafish.

REFERENCES

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2. Peterson, J.M., et al. 2009. CTRP8 and CTRP9B are novel proteins that hetero-oligomerize with C1q/TNF family members. *Biochem. Biophys. Res. Commun.* 388: 360-365.
3. 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.
4. Shah, A., et al. 2012. Adipokines and body fat composition in South Asians: results of the Metabolic Syndrome and Atherosclerosis in South Asians Living in America (MASALA) study. *Int. J. Obes.* 36: 810-816.
5. Lee, J.A., et al. 2012. Effects of yoga exercise on serum adiponectin and metabolic syndrome factors in obese postmenopausal women. *Menopause* 19: 296-301.
6. Hwang, Y.C., et al. 2014. Association of serum C1q/TNF-related protein-9 (CTRP9) concentration with visceral adiposity and metabolic syndrome in humans. *Int. J. Obes.* 38: 1207-1212.

CHROMOSOMAL LOCATION

Genetic locus: C1qtnf9 (mouse) mapping to 14 D1.

PRODUCT

CTRP9 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 CTRP9 shRNA Plasmid (m): sc-142629-SH and CTRP9 shRNA (m) Lentiviral Particles: sc-142629-V as alternate gene silencing products.

For independent verification of CTRP9 (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-142629A, sc-142629B and sc-142629C.

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

CTRP9 siRNA (m) is recommended for the inhibition of CTRP9 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CTRP9 gene expression knockdown using RT-PCR Primer: CTRP9 (m)-PR: sc-142629-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.

PROTOCOLS

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