

CXXC5 siRNA (h): sc-91677

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. CXXC5 (CXXC finger 5), also known as RINF or HSPC195, is a 322 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one CXXC-type zinc finger. Interacting with Dvl-1, CXXC5 acts as a mediator of Wnt signaling in neural stem cells and is thought to participate in the activation of MAP kinase pathways. The gene encoding CXXC5 maps to human chromosome 5q31.2 and is expressed as multiple alternatively spliced isoforms.

REFERENCES

1. Katoh, M. and Katoh, M. 2004. Identification and characterization of FBXL19 gene in silico. *Int. J. Mol. Med.* 14: 1109-1114.
2. Katoh, M. and Katoh, M. 2004. Identification and characterization of human CXXC10 gene in silico. *Int. J. Oncol.* 25: 1193-1199.
3. Pendino, F., et al. 2009. Functional involvement of RINF, retinoid-inducible nuclear factor (CXXC5), in normal and tumoral human myelopoiesis. *Blood* 113: 3172-3181.
4. Gelsi-Boyer, V., et al. 2009. Mutations of polycomb-associated gene ASXL1 in myelodysplastic syndromes and chronic myelomonocytic leukaemia. *Br. J. Haematol.* 145: 788-800.
5. Andersson, T., et al. 2009. CXXC5 is a novel BMP4-regulated modulator of Wnt signaling in neural stem cells. *J. Biol. Chem.* 284: 3672-3681.

CHROMOSOMAL LOCATION

Genetic locus: CXXC5 (human) mapping to 5q31.2.

PRODUCT

CXXC5 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 CXXC5 shRNA Plasmid (h): sc-91677-SH and CXXC5 shRNA (h) Lentiviral Particles: sc-91677-V as alternate gene silencing products.

For independent verification of CXXC5 (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-91677A, sc-91677B and sc-91677C.

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

CXXC5 siRNA (h) is recommended for the inhibition of CXXC5 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

CXXC5 (H-6): sc-376348 is recommended as a control antibody for monitoring of CXXC5 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 CXXC5 gene expression knockdown using RT-PCR Primer: CXXC5 (h)-PR: sc-91677-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Marshall, P.A., et al. 2012. Discovery of novel vitamin D receptor interacting proteins that modulate 1,25-dihydroxyvitamin D₃ signaling. *J. Steroid Biochem. Mol. Biol.* 132: 147-159.
2. Purandare, N., et al. 2018. The cellular stress proteins CHCHD10 and MNRR1 (CHCHD2): partners in mitochondrial and nuclear function and dysfunction. *J. Biol. Chem.* 293: 6517-6529.

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.