

WWC2 siRNA (h): sc-89074

BACKGROUND

WWC2 (WW and C2 domain containing 2), also known as BOMB (BH-3-only member B), is a 1,192 amino acid protein belonging to the WWC family. Containing one C2 domain and two WW domains, WWC2 exists as seven alternatively spliced isoforms and is encoded by a gene located on human chromosome 4q35.1. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, located on chromosome 4. FGFR-3 is also encoded by a gene that maps to chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease. Chromosome 4 reportedly contains the largest gene deserts (regions of the genome with no protein encoding genes) and has one of the two lowest recombination frequencies of the human chromosomes.

REFERENCES

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3. Chandler, R.J., et al. 2007. Metabolic phenotype of methylmalonic acidemia in mice and humans: the role of skeletal muscle. *BMC Med. Genet.* 8: 64.
4. Cunningham, M.L., et al. 2007. Syndromic craniosynostosis: from history to hydrogen bonds. *Orthod. Craniofac. Res.* 10: 67-81.
5. de Frutos, C.A., et al. 2007. Snail1 is a transcriptional effector of FGFR3 signaling during chondrogenesis and achondroplasias. *Dev. Cell* 13: 872-883.
6. Versteegh, F.G., et al. 2007. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. *Am. J. Med. Genet. A* 143A: 2113-2121.
7. Doherty, E.S., et al. 2007. Muenke syndrome (FGFR3-related craniosynostosis): expansion of the phenotype and review of the literature. *Am. J. Med. Genet. A* 143A: 3204-3215.

CHROMOSOMAL LOCATION

Genetic locus: WWC2 (human) mapping to 4q35.1.

PRODUCT

WWC2 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 WWC2 shRNA Plasmid (h): sc-89074-SH and WWC2 shRNA (h) Lentiviral Particles: sc-89074-V as alternate gene silencing products.

For independent verification of WWC2 (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-89074A, sc-89074B and sc-89074C.

RESEARCH USE

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

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

WWC2 siRNA (h) is recommended for the inhibition of WWC2 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

WWC2 (H-1): sc-515892 is recommended as a control antibody for monitoring of WWC2 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 WWC2 gene expression knockdown using RT-PCR Primer: WWC2 (h)-PR: sc-89074-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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