

WFDC11 siRNA (m): sc-151765

BACKGROUND

Peptidases are enzymes that are responsible for hydrolyzing peptide bonds of polypeptide chains during protein catabolism. Protease inhibitors are important peptidase regulators which halt enzymatic function. The WAP (whey acidic protein) domain, also referred to as the WAP-type four-disulfide core domain, is a signature protein motif that contains eight cysteine residues which form disulfide bonds and may exhibit protease inhibitor activity. WAP domain-containing proteins are thought to function in the immune defense by cleaving microbial proteolytic enzymes in order to prevent tissue penetration and infection. WFDC11 (WAP four-disulfide core domain protein 11), also known as WAP11, is a 87 amino acid secreted protein that doesn't contain a classical WAP domain, however the gene encoding WFDC11 resides within a cluster of WAP genes on chromosome 20. WFDC11 contains a 25 amino acid N-terminal signal peptide that is cleaved to result in a secreted mature form.

REFERENCES

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3. Shayu, D., et al. 2006. Differential expression and antibacterial activity of WFDC10A in the monkey epididymis. *Mol. Cell. Endocrinol.* 259: 50-56.
4. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
5. Sharp, J.A., et al. 2007. Molecular evolution of monotreme and marsupial whey acidic protein genes. *Evol. Dev.* 9: 378-392.
6. Hurlle, B., et al. 2007. Comparative sequence analyses reveal rapid and divergent evolutionary changes of the WFDC locus in the primate lineage. *Genome Res.* 17: 276-286.
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8. Bingle, C.D., et al. 2008. Novel innate immune functions of the whey acidic protein family. *Trends Immunol.* 29: 444-453.
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CHROMOSOMAL LOCATION

Genetic locus: *Wfdc11* (mouse) mapping to 2 H3.

PRODUCT

WFDC11 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see WFDC11 shRNA Plasmid (m): sc-151765-SH and WFDC11 shRNA (m) Lentiviral Particles: sc-151765-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 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

WFDC11 siRNA (m) is recommended for the inhibition of WFDC11 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 WFDC11 gene expression knockdown using RT-PCR Primer: WFDC11 (m)-PR: sc-151765-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.