SANTA CRUZ BIOTECHNOLOGY, INC.

# MS4A6A siRNA (h): sc-96644

## BACKGROUND

MS4A (membrane-spanning 4-domain family, subfamily A) is a large family of proteins that includes at least 26 members in mouse and humans. Flanked by amino- and carboxyl-cytoplasmic regions, MS4A family members contain four highly conserved transmembrane domains. MS4A6A (membrane-spanning four-domains, subfamily A, member 6A), also known as CDA01 (CD20 antigen-like 3) or 4SPAN3 (four-span transmembrane protein 3), is a 248 amino acid multi-pass membrane protein that exists as four alternatively spliced isoforms. Expressed in various B-cell, myelomonocytic, and erythroleukemia cell lines, MS4A6A is encoded by a gene that maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

## REFERENCES


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2. Ishibashi, K., et al. 2001. Identification of a new multigene four-transmembrane family (MS4A) related to CD20, HTm4 and β subunit of the high-affinity IgE receptor. Gene 264: 87-93.
3. Liang, Y., et al. 2001. Identification of a CD20-, FcεRIβ-, and HTm4-related gene family: sixteen new MS4A family members expressed in human and mouse. Genomics 72: 119-127.
4. Liang, Y., et al. 2001. Structural organization of the human MS4A gene cluster on chromosome 11q12. Immunogenetics 53: 357-368.
5. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. Ann. Hum. Genet. 67: 269-280.
6. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. J. Inherit. Metab. Dis. 30: 654-663.


## CHROMOSOMAL LOCATION

Genetic locus: MS4A6A (human) mapping to 11q12.2.

## PRODUCT

MS4A6A siRNA (h) is a pool of 2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MS4A6A shRNA Plasmid (h): sc-96644-SH and MS4A6A shRNA (h) Lentiviral Particles: sc-96644-V as alternate gene silencing products.

For independent verification of MS4A6A (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-96644A and sc-96644B.

## 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

MS4A6A siRNA (h) is recommended for the inhibition of MS4A6A 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 µM in 66 µl. 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 MS4A6A gene expression knockdown using RT-PCR Primer: MS4A6A (h)-PR: sc-96644-PR (20 µl). 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.