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MS4A4C siRNA (m): sc-149650

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. The MS4A family of proteins include CD20, Fc ϵ RI β and MS4A3, whose genes are grouped in a chromosomal location that is associated with increased susceptibility to allergy and atopic asthma. The expression of MS4A4B, a member of the MS4A family, is suggested to be tightly regulated during T-cell development and the promotion of Th1 (T helper 1) function and differentiation. CD20, the most well-known MS4A family member, is a B cell-specific molecule that functions as a calcium-permeable cation channel and is known to accelerate the G₀ to G₁ progression induced by IGF-1. Several other MS4A family members are likely to be components of oligomeric cell surface complexes involved in signal transduction in diverse cell lineages. MS4A4C (membrane-spanning 4-domains, subfamily A, member 4C), also known as Ms4a9, is a 184 amino acid protein that belongs to the MS4A family.

REFERENCES

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2. Liang, Y. and Tedder, T.F. 2001. Identification of a CD20-, Fc ϵ RI β -, and HTm4-related gene family: sixteen new MS4A family members expressed in human and mouse. *Genomics* 72: 119-127.
3. Liang, Y., et al. 2001. Structural organization of the human MS4A gene cluster on Chromosome 11q12. *Immunogenetics* 53: 357-368.
4. Obara, M., et al. 2002. A plant Y chromosome-STS marker encoding a degenerate retrotransposon. *Genes Genet. Syst.* 77: 393-398.
5. Bangur, C.S., et al. 2004. Identification and characterization of L985P, a CD20 related family member over-expressed in small cell lung carcinoma. *Int. J. Oncol.* 25: 1583-1590.
6. Xu, H., et al. 2006. Patterns of expression, membrane localization, and effects of ectopic expression suggest a function for MS4a4B, a CD20 homolog in Th1 T cells. *Blood* 107: 2400-2408.

CHROMOSOMAL LOCATION

Genetic locus: Ms4a4c (mouse) mapping to 19 A.

PRODUCT

MS4A4C 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 MS4A4C shRNA Plasmid (m): sc-149650-SH and MS4A4C shRNA (m) Lentiviral Particles: sc-149650-V as alternate gene silencing products.

For independent verification of MS4A4C (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-149650A, sc-149650B and sc-149650C.

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

MS4A4C siRNA (m) is recommended for the inhibition of MS4A4C 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 MS4A4C gene expression knockdown using RT-PCR Primer: MS4A4C (m)-PR: sc-149650-PR (20 μ l, 507 bp). 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.