

CD164 siRNA (m): sc-44678

BACKGROUND

CD164 is a mucin-like cell surface glycoprotein that facilitates adhesion of CD34⁺ cells and serves as a negative regulator of hematopoietic progenitor cell proliferation. Human CD164 in CD34⁺CD38⁺ hematopoietic progenitor and epithelial cell lines localizes to endosomes and lysosomes, with low concentrations also appearing at the cell surface.

REFERENCES

1. Watt, S.M., et al. 1998. CD164, a novel sialomucin on CD34⁺ and erythroid subsets, is located on human chromosome 6q21. *Blood* 92: 849-866.
2. Doyonnas, R., et al. 2000. CD164 monoclonal antibodies that block hematopoietic progenitor cell adhesion and proliferation interact with the first mucin domain of the CD164 receptor. *J. Immunol.* 165: 840-851.
3. Watt, S.M., et al. 2000. Functionally defined CD164 epitopes are expressed on CD34⁺ cells throughout ontogeny but display distinct distribution patterns in adult hematopoietic and nonhematopoietic tissues. *Blood* 95: 3113-3124.
4. Chan, J.Y., et al. 2001. Relationship between novel isoforms, functionally important domains, and subcellular distribution of CD164/endolyn. *J. Biol. Chem.* 276: 2139-2152.
5. Lee, Y.N., et al. 2001. Identification of a role for the sialomucin CD164 in myogenic differentiation by signal sequence trapping in yeast. *Mol. Cell. Biol.* 21: 7696-7706.
6. McGuckin, C.P., et al. 2003. Colocalization analysis of sialomucins CD34 and CD164. *Stem Cells* 21: 162-170.
7. Jorgensen-Tye, B., et al. 2005. Epitope recognition of antibodies that define the sialomucin, endolyn (CD164), a negative regulator of haematopoiesis. *Tissue Antigens* 65: 220-239.
8. Havens, A.M., et al. 2006. The role of sialomucin CD164 (MGC-24v or endolyn) in prostate cancer metastasis. *BMC Cancer* 6: 195.
9. Bae, G.U., et al. 2008. Regulation of myoblast motility and fusion by the CXCR4-associated sialomucin, CD164. *J. Biol. Chem.* 283: 8301-8309.

CHROMOSOMAL LOCATION

Genetic locus: Cd164 (mouse) mapping to 10 B2.

PRODUCT

CD164 siRNA (m) 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 CD164 shRNA Plasmid (m): sc-44678-SH and CD164 shRNA (m) Lentiviral Particles: sc-44678-V as alternate gene silencing products.

For independent verification of CD164 (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-44678A, sc-44678B and sc-44678C.

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

CD164 siRNA (m) is recommended for the inhibition of CD164 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.

GENE EXPRESSION MONITORING

CD164 (H-4): sc-271179 is recommended as a control antibody for monitoring of CD164 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 CD164 gene expression knockdown using RT-PCR Primer: CD164 (m)-PR: sc-44678-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.