

CD52 siRNA (m): sc-44667

BACKGROUND

CD52 is a glycosylphosphatidylinositol (GPI)-linked surface antigen present at high levels on epithelial cells lining the male reproductive tract, thymocytes, lymphocytes, monocytes and macrophages. It is also present at variable levels on lymphoid malignancies. During sperm maturation, spermatozoa passing through the genital tract acquire CD52 that is shed from the epithelial cell lining into seminal plasma. CD52 is detectable on the surface of epididymal sperm and in the ejaculate but not on spermatogenic cells or testicular spermatozoa. The peptide backbone of CD52, which consists of 12 amino acids, is considered a mere scaffold for posttranslational modifications, such as GPI-anchor and N-glycosylation.

REFERENCES

1. Yeung, C.H., et al. 1997. Human epididymal secreted protein CD52 on ejaculated spermatozoa: correlations with semen characteristics and the effect of its antibody. *Mol. Hum. Reprod.* 3: 1045-1051.
2. Domagala, A. and Kurpisz, M. 2001. CD52 antigen—a review. *Med. Sci. Monit.* 7: 325-331.
3. Xue, J., et al. 2003. First total synthesis of a GPI-anchored peptide. *J. Org. Chem.* 68: 4020-4029.
4. Shao, N., et al. 2003. Chemical synthesis of CD52 glyco-peptides containing the acid-labile fucosyl linkage. *J. Org. Chem.* 68: 9003-9011.
5. Kumar, S., et al. 2003. Expression of CD52 on plasma cells in plasma cell proliferative disorders. *Blood* 102: 1075-1077.
6. Hasegawa, A., et al. 2004. Possible presence of O-linked carbohydrate in the human male reproductive tract CD52. *J. Reprod. Immunol.* 62: 91-100.
7. Hasegawa, A. and Koyama, K. 2005. Antigenic epitope for sperm-immobilizing antibody detected in infertile women. *J. Reprod. Immunol.* 67: 77-86.
8. Ermini, L., et al. 2005. Different glycoforms of the human GPI-anchored antigen CD52 associate differently with lipid microdomains in leukocytes and sperm membranes. *Biochem. Biophys. Res. Commun.* 338: 1275-1283.

CHROMOSOMAL LOCATION

Genetic locus: Cd52 (mouse) mapping to 4 D3.

PRODUCT

CD52 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 CD52 shRNA Plasmid (m): sc-44667-SH and CD52 shRNA (m) Lentiviral Particles: sc-44667-V as alternate gene silencing products.

For independent verification of CD52 (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-44667A, sc-44667B and sc-44667C.

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

CD52 siRNA (m) is recommended for the inhibition of CD52 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 CD52 gene expression knockdown using RT-PCR Primer: CD52 (m)-PR: sc-44667-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.