SANTA CRUZ BIOTECHNOLOGY, INC.

syncytin-B siRNA (m): sc-142860

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The Power to Question

BACKGROUND

Syncytin, also known as ERVWE1 (endogenous retroviral family W, env(C7), member 1), is a human endogenous retrovirus family W (HERV-W) envelope protein expressed in placenta that is involved in the fusion of cytotrophoblast cells to form the multi-nucleated syncytial layer of the placenta. In both humans and mice, placental cytotrophoblast morphogenesis, more commonly known as trophoblast maturation, is crucial for proper embryonic and placental development. D930020E02Rik (RIKEN cDNA D930020E02 gene), also known as Synb or syncytin-B, is a 618 amino acid protein that is the homolog of human syncytin-2. A single-pass membrane protein that is highly expressed in placenta, syncytin-2 functions as a retroviral envelope protein that mediates receptor recognition and membrane fusion during early infection. Syncytin-2 belongs to the γ type-C retroviral envelope protein family and the HERV class-I FRD subfamily.

REFERENCES

1. Blaise, S., et al. 2003. Genomewide screening for fusogenic human endogenous retrovirus envelopes identifies syncytin 2, a gene conserved on primate evolution. Proc. Natl. Acad. Sci. USA 100: 13013-13018.
2. Blaise, S., et al. 2004. Identification of an envelope protein from the FRD family of human endogenous retroviruses (HERV-FRD) conferring infectivity and functional conservation among simians. J. Virol. 78: 1050-1054.
3. Renard, M., et al. 2005. Crystal structure of a pivotal domain of human syncytin-2, a 40 million years old endogenous retrovirus fusogenic envelope gene captured by primates. J. Mol. Biol. 352: 1029-1034.
4. Blaise, S., et al. 2005. Functional characterization of two newly identified Human Endogenous Retrovirus coding envelope genes. Retrovirology 2: 19.
5. Malassiné, A., et al. 2007. Expression of the fusogenic HERV-FRD Env glycoprotein (syncytin 2) in human placenta is restricted to villous cytotrophoblastic cells. Placenta 28: 185-191.
6. Larsson, L.I., et al. 2007. Syncytin and cancer cell fusions. ScientificWorldJournal 7: 1193-1197.

CHROMOSOMAL LOCATION

Genetic locus: Synb (mouse) mapping to 14 D2.

PRODUCT

syncytin-B 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see syncytin-B shRNA Plasmid (m): sc-142860-SH and syncytin-B shRNA (m) Lentiviral Particles: sc-142860-V as alternate gene silencing products.

For independent verification of syncytin-B (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-142860A, sc-142860B and sc-142860C.

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

syncytin-B siRNA (m) is recommended for the inhibition of syncytin-B 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 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 syncytin-B gene expression knockdown using RT-PCR Primer: syncytin-B (m)-PR: sc-142860-PR (20 µl). 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.