SANTA CRUZ BIOTECHNOLOGY, INC.

Cd302 siRNA (m): sc-142196

BACKGROUND

Cd302, also known as Clec13a (C-type lectin domain family 13 member a), is a 228 amino acid single-pass type I membrane protein that contains one C-type lectin domain and exists as two alternatively spliced isoforms. As a potential multifunctional C-type lectin receptor, Cd302 may play a role in endocytosis and phagocytosis, as well as cell adhesion and migration. The gene that encodes Cd302 maps to mouse chromosome 2 C1.1. Chromosome 2 consists of approximately 182 million base pairs and encodes more than 2,600 genes. The quantitative trait locus (QTL) for obesity maps to mouse chromosome 2, in a region syntenic with a large region of human chromosome 20, showing linkage to percent body fat and fat mass. Septo-optic dysplasia (SOD), a disorder characterized by abnormalities in the corpus callosum, the anterior and hippocampal commissures, and the septum pellucidum, is also associated with chromosome 2. Mutations in the homeobox gene, Hesx1, lead to the development of SOD, which first becomes apparent during mouse ebryogenesis.

REFERENCES

1. Featherstone, M.S., et al. 1988. Hox-5.1 defines a homeobox-containing gene locus on mouse chromosome 2. Proc. Natl. Acad. Sci. USA 85: 4760-4764.
2. Lembertas, A.V., et al. 1997. Identification of an obesity quantitative trait locus on mouse chromosome 2 and evidence of linkage to body fat and Insulin on the human homologous region 20q. J. Clin. Invest. 100: 1240-1247.
3. Comuzzie, A.G., et al. 1997. A major quantitative trait locus determining serum leptin levels and fat mass is located on human chromosome 2. Nat. Genet. 15: 273-276.
4. Dattani, M.T., et al. 1998. Mutations in the homeobox gene HESX1/Hesx1 associated with septo-optic dysplasia in human and mouse. Nat. Genet. 19: 125-133.
5. Peters, J., et al. 1999. Mouse chromosome 2. Mamm. Genome 10: 941.
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CHROMOSOMAL LOCATION

Genetic locus: Cd302 (mouse) mapping to 2 C1.1.

PRODUCT

Cd302 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 Cd302 shRNA Plasmid (m): sc-142196-SH and Cd302 shRNA (m) Lentiviral Particles: sc-142196-V as alternate gene silencing products.

For independent verification of Cd302 (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-142196A, sc-142196B and sc-142196C.

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

Cd302 siRNA (m) is recommended for the inhibition of Cd302 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 Cd302 gene expression knockdown using RT-PCR Primer: Cd302 (m)-PR: sc-142196-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.