SANTA CRUZ BIOTECHNOLOGY, INC.

CD2BP2 siRNA (m): sc-72827

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD2BP2 (CD2 (cytoplasmic tail) binding protein 2), also known as LIN1, Snu40, FWP010 or U5-52K, is a 341 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one GYF domain. Expressed in a variety of tissues, CD2BP2 exists as a bi-functional protein that, in the nucleus, is a component of the U5 small nuclear ribonucleoprotein complex and, in the cytoplasm, binds to the tail of the CD2 antigen. Via its multifunctional activity, CD2BP2 participates in RNA splicing and regulates CD2-triggered T-lymphocyte activation. The gene encoding CD2BP2 maps to human chromosome 16p11.2, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Nishizawa, K., et al. 1998. Identification of a proline-binding motif regulating CD2-triggered T lymphocyte activation. Proc. Natl. Acad. Sci. USA 95: 14897-14902.
2. Kofler, M., et al. 2005. Novel interaction partners of the CD2BP2-GYF domain. J. Biol. Chem. 280: 33397-33402.
3. Kofler, M., et al. 2005. GYF domain proteomics reveals interaction sites in known and novel target proteins. Mol. Cell. Proteomics 4: 1797-1811.
4. Laggerbauer, B., et al. 2005. The human U5 snRNP 52K protein (CD2BP2) interacts with U5-102K (hPrp6), a U4/U6.U5 tri-snRNP bridging protein, but dissociates upon tri-snRNP formation. RNA 11: 598-608.
5. Kofler, M.M., et al. 2006. The GYF domain. FEBS J. 273: 245-256.
6. Monos, D., et al. 2006. Analysis of the CD2 and spliceosomal Sm B/B' polyproline-arginine motifs defined by a monoclonal antibody using a phage-displayed random peptide library. J. Mol. Recognit. 19: 535-541.

CHROMOSOMAL LOCATION

Genetic locus: Cd2bp2 (mouse) mapping to 7 F3.

PRODUCT

CD2BP2 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 CD2BP2 shRNA Plasmid (m): sc-72827-SH and CD2BP2 shRNA (m) Lentiviral Particles: sc-72827-V as alternate gene silencing products.

For independent verification of CD2BP2 (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-72827A, sc-72827B and sc-72827C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

CD2BP2 siRNA (m) is recommended for the inhibition of CD2BP2 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 CD2BP2 gene expression knockdown using RT-PCR Primer: CD2BP2 (m)-PR: sc-72827-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.