SANTA CRUZ BIOTECHNOLOGY, INC.

DDHD2 siRNA (h): sc-77719

BACKGROUND

DDHD2 (DDHD domain-containing protein 2), also known as SAMWD1, is a 711 amino acid cytoplasmic protein that belongs to the PA-PLA1 family. DDHD2 is a phospholipase that hydrolyzes phosphatidylethanolamine and phosphatidic acid. Additionally, DDHD2 is thought to play a role in the maintenance of the endoplasmic reticulum and/or Golgi structures. Ubiquitously expressed, DDHD2 contains one WWE, a SAM and a single DDHD domain. Serine 447 is post-translationally phosphorylated and the gene encoding DDHD2 maps to human chromosome 8. Chromosome 8 consists of nearly 146 million base pairs, encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
2. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. Biochem. Biophys. Res. Commun. 289: 111-115.
3. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. Hum. Genet. 110: 64-67.
4. Nakajima, K., et al. 2002. A novel phospholipase A1 with sequence homology to a mammalian Sec23p-interacting protein, p125. J. Biol. Chem. 277: 11329-11335.
5. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
6. Shimoi, W., et al. 2005. p125 is localized in endoplasmic reticulum exit sites and involved in their organization. J. Biol. Chem. 280: 10141-10148.
7. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. Leuk. Lymphoma 47: 1885-1893.

CHROMOSOMAL LOCATION

Genetic locus: DDHD2 (human) mapping to 8p11.23.

PRODUCT

DDHD2 siRNA (h) 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 DDHD2 shRNA Plasmid (h): sc-77719-SH and DDHD2 shRNA (h) Lentiviral Particles: sc-77719-V as alternate gene silencing products.

For independent verification of DDHD2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77719A, sc-77719B and sc-77719C.

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

DDHD2 siRNA (h) is recommended for the inhibition of DDHD2 expression in human 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 DDHD2 gene expression knockdown using RT-PCR Primer: DDHD2 (h)-PR: sc-77719-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.