SANTA CRUZ BIOTECHNOLOGY, INC.

CDYL2 siRNA (h): sc-93265

BACKGROUND

CDY is a gene family expressed exclusively in the testis that localizes to a region of the Y chromosome frequently deleted in infertile males. CDY proteins contain two functional domains, an N-terminal chromodomain, possibly functioning in heterochromatin interactions, and a C-terminal domain, which resembles enoyl-CoA-isomerase, a protein involved in fatty acid oxidation. Furthermore, CDY proteins act as histone acetyltransferases with strong preference for Histone H4, a process required for the histone to proamine transition in spermatogenesis, consistent with the association with male infertility. Chromodomain Y-like protein 2 (CDYL2) is a related nuclear protein that is ubiquitously expressed with moderate levels in most tissues. The gene encoding CDYL2 is located on chromosome 16.

REFERENCES

1. Lahn, B.T., et al. 1999. Retroposition of autosomal mRNA yielded testis-specific gene family on human Y chromosome. Nat. Genet. 21: 429-433.
2. Wimmer, R., et al. 2002. Comparative mapping of CDY and DAZ in higher primates. Cytogenet Genome Res. 96: 287-289.
3. Lahn, B.T., et al. 2002. Previously uncharacterized histone acetyltransferases implicated in mammalian spermatogenesis. Proc. Natl. Acad. Sci. USA 99: 8707-8712.
4. Kostova, E., et al. 2002. Identification and characterization of the cynomolgus monkey chromodomain gene cynCDY, an orthologue of the human CDY gene family. Mol. Hum. Reprod. 8: 702-709.
5. Kleiman, S.E., et al. 2003. Members of the CDY family have different expression patterns: CDY1 transcripts have the best correlation with complete spermatogenesis. Hum. Genet. 113: 486-492.
6. Dorus, S., et al. 2003. The CDY-related gene family: coordinated evolution in copy number, expression profile and protein sequence. Hum. Mol. Genet. 12: 1643-1650.
7. Martin, J., et. al. 2004. The sequence and analysis of duplication-rich human chromosome 16. Nature 432: 988-994.

CHROMOSOMAL LOCATION

Genetic locus: CDYL2 (human) mapping to 16q23.2.

PRODUCT

CDYL2 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 CDYL2 shRNA Plasmid (h): sc-93265-SH and CDYL2 shRNA (h) Lentiviral Particles: sc-93265-V as alternate gene silencing products.

For independent verification of CDYL2 (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-93265A, sc-93265B and sc-93265C.

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 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

CDYL2 siRNA (h) is recommended for the inhibition of CDYL2 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 CDYL2 gene expression knockdown using RT-PCR Primer: CDYL2 (h)-PR: sc-93265-PR (20 µl). 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.