SANTA CRUZ BIOTECHNOLOGY, INC.

CAT56 siRNA (m): sc-142028

BACKGROUND

Proline-rich proteins are often involved in protein-protein interactions and typically act as ligands for SH3, WW and EVH1 domains. CAT56 (MHC class I region proline-rich protein CAT56), also known as PRR3 (proline rich 3), is a 188 amino acid protein that contains one C3H1-type zinc finger and exists as two alternatively spliced isoforms. The gene encoding CAT56 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. Hum. Mol. Genet. 3: 1561-1564.
2. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. Proc. Natl. Acad. Sci. USA 100: 5956-5961.
3. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. Genes Chromosomes Cancer 47: 159-164.
4. Skibola, C.F., et al. 2009. Genetic variants at 6p21.33 are associated with susceptibility to follicular lymphoma. Nat. Genet. 41: 873-875.
5. Amos, C.I., et al. 2010. A susceptibility locus on chromosome 6q greatly increases lung cancer risk among light and never smokers. Cancer Res. 70: 2359-2367.
6. Jalil, S., et al. 2010. Associations among behavior-related susceptibility factors in porphyria cutanea tarda. Clin. Gastroenterol. Hepatol. 8: 297-302.

CHROMOSOMAL LOCATION

Genetic locus: Prr3 (mouse) mapping to 17 B1.

PRODUCT

CAT56 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 CAT56 shRNA Plasmid (m): sc-142028-SH and CAT56 shRNA (m) Lentiviral Particles: sc-142028-V as alternate gene silencing products.

For independent verification of CAT56 (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-142028A, sc-142028B and sc-142028C.

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

CAT56 siRNA (m) is recommended for the inhibition of CAT56 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 CAT56 gene expression knockdown using RT-PCR Primer: CAT56 (m)-PR: sc-142028-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.