SANTA CRUZ BIOTECHNOLOGY, INC.

BinCARD siRNA (m): sc-141706

BACKGROUND

BinCARD (Bcl10-interacting CARD protein) is a 228 amino acid protein that exists as two alternatively spiced isoforms. BinCARD localizes to nucleus and is expressed in ovary, testis, placenta, skeletal muscle, kidney, lung, heart, liver, thymus and brain. Containing a CARD domain, BinCARD plays a role in inhibiting the effects of Bcl10-induced activation of NFκB possibly by inhibiting the phosphorylation of Bcl10 in a CARD-dependent manner. The BinCARD gene maps to chromosome 9q22.31. Chromosome 9 consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes. Notably, chromosome 9 encompasses the largest interferon family gene cluster. Considered to play a role in gender determination, deletion of the distal portion of 9p can lead to development of male to female sex reversal, the phenotype of a female with a male X,Y genotype. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene encoding endoglin protein, ENG. Familial dysautonomia is also associated with chromosome 9 though through the gene IKAP.

REFERENCES

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4. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. Nature 429: 369-374.
5. Wang, P., et al. 2006. Cloning of a novel human caspase-9 splice variant containing only the CARD domain. Life Sci. 79: 934-940.
6. Temtamy, S.A., et al. 2007. Phenotypic and cytogenetic spectrum of 9p trisomy. Genet. Couns. 18: 29-48.
7. Fernandez-L, A., et al. 2007. Gene expression fingerprinting for human hereditary hemorrhagic telangiectasia. Hum. Mol. Genet. 16: 1515-1533.
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CHROMOSOMAL LOCATION

Genetic locus: 1110007C09Rik (mouse) mapping to 13 A5.

PRODUCT

BinCARD siRNA (m) is a target-specific 19-25 nt siRNA 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 BinCARD shRNA Plasmid (m): sc-141706-SH and BinCARD shRNA (m) Lentiviral Particles: sc-141706-V as alternate gene silencing 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

BinCARD siRNA (m) is recommended for the inhibition of BinCARD 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 BinCARD gene expression knockdown using RT-PCR Primer: BinCARD (m)-PR: sc-141706-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.