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CARM1 shRNA (h) Lentiviral Particles: sc-44875-V

BACKGROUND

CARM1 (co-activator-associated arginine methyltransferase 1), also known as protein arginine N-methyltransferase 4 (PRMT4), is a 585 amino acid nuclear and cytoplasmic protein belonging to the protein arginine N-methyltransferase family. As a protein arginine N-methyltransferase, CARM1 is capable of catalyzing the transfer of methyl groups from S-adenosylmethionine to the guanidino group nitrogen atoms of arginine residues in certain proteins involved in mRNA stability, DNA packaging and transcriptional regulation. The methyltransferase activity of CARM1 has been found to be negatively regulated through phosphorylation at a conserved serine residue. CARM1 acts as a positive regulator for multiple transcription factors and functions as a secondary co-activator through its association with p160 co-activators. CARM1 exists as two alternatively spliced isoforms, and is encoded by a gene that maps to human chromosome 19p13.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CARM1 (human) mapping to 19p13.2.

PRODUCT

CARM1 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 μ l frozen stock containing 1.0×10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see CARM1 siRNA (h): sc-44875 and CARM1 shRNA Plasmid (h): sc-44875-SH as alternate gene silencing products.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

APPLICATIONS

CARM1 shRNA (h) Lentiviral Particles is recommended for the inhibition of CARM1 expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 μ l frozen viral stock containing 1.0×10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

CARM1 (G-2): sc-393381 is recommended as a control antibody for monitoring of CARM1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CARM1 gene expression knockdown using RT-PCR Primer: CARM1 (h)-PR: sc-44875-PR (20 μ l, 419 bp). Annealing temperature for the primers should be $55-60^{\circ}$ C and the extension temperature should be $68-72^{\circ}$ C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

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