SANTA CRUZ BIOTECHNOLOGY, INC.

CARD 10 siRNA (m): sc-60327

BACKGROUND

Membrane-associated guanylate kinase (MAGUK) family members function as molecular scaffolds for the assembly of multiprotein complexes localizing to the plasma membrane. Several mammalian proteins related to the *Drosophila* tumor suppressor discs-large (dlg) gene product belong to the MAGUK family, including the caspase recruitment domain (CARD) protein family with the exception of CARD 9. The CARD domain consists of six or seven antiparallel α helices. CARD family members participate in apoptosis signaling through highly specific protein-protein homophilic interactions. CARD 10 (also designated CARD-containing MAGUK protein 3 or Carma 3) interacts with Bcl10 to activate NFκB. CARD 10 is expressed in a variety of adult and fetal tissues, including heart, kidney and liver, and in multiple cancer cell lines.

REFERENCES

1. Dimitratos, S.D., et al. 1997. Camguk, Lin-2, and CASK: novel membrane-associated guanylate kinase homologs that also contain CaM kinase domains. Mech. Dev. 63: 127-130.
2. Bredt, D.S. 2000. Reeling CASK into the nucleus. Nature 404: 241-242.
3. Hsueh, Y.P., et al. 2000. Nuclear translocation and transcription regulation by the membrane-associated guanylate kinase CASK/LIN-2. Nature 404: 298-302.
4. Wang, L., et al. 2001. CARD10 is a novel caspase recruitment domain/membrane-associated guanylate kinase family member that interacts with Bcl10 and activates NFκB. J. Biol. Chem. 276: 21405-21409.
5. Gaide, O., et al. 2001. Carma 1, a CARD-containing binding partner of Bcl10, induces Bcl10 phosphorylation and NFκB activation. FEBS Lett. 496: 121-127.
6. Stilo, R., et al. 2004. Physical and functional interaction of Carma 1 and Carma 3 with Iκ kinase γ-NFκB essential modulator. J. Biol. Chem. 279: 34323-34331.

CHROMOSOMAL LOCATION

Genetic locus: Card10 (mouse) mapping to 15 E1.

PRODUCT

CARD 10 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 CARD 10 shRNA Plasmid (m): sc-60327-SH and CARD 10 shRNA (m) Lentiviral Particles: sc-60327-V as alternate gene silencing products.

For independent verification of CARD 10 (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-60327A, sc-60327B and sc-60327C.

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

CARD 10 siRNA (m) is recommended for the inhibition of CARD 10 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.

GENE EXPRESSION MONITORING

CARD 10 (B-4): sc-271849 is recommended as a control antibody for monitoring of CARD 10 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 reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CARD 10 gene expression knockdown using RT-PCR Primer: CARD 10 (m)-PR: sc-60327-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.