SANTA CRUZ BIOTECHNOLOGY, INC.

CARD 9 (C-2): sc-374007

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Membrane-associated guanylate kinase (MAGUK) family members localize to the plasma membrane and function as molecular scaffolds for the assembly of multi-protein complexes. The MAGUK family includes several mammalian proteins related to the *Drosophila* tumor suppressor discs-large (dlg) gene product such as postsynaptic proteins, GKAPs, the tight junction associated proteins (ZO-1–3) and the caspase-associated recruitment domain (CARD) proteins, CARD 6, CARD 8-12 and CARD 14. CARD 9 is the main transducer of Dectin-1 signals that consist of mediated myeloid cell activation, cytokine production and innate anti-fungal immunity. Dectin-1 is the main mammalian receptor that recognizes the fungal component zymosan. CARD 9 self-associates and has coiled-coil motifs that may function as oligomerization domains. Bcl10 interacts with CARD 9 and regulates the zymosan induced NFκB activation. Overexpression of CARD 9 correlates with the development of gastric B-cell lymphoma.

REFERENCES

1. Bertin, J., et al. 2000. CARD 9 is a novel caspase recruitment domain-containing protein that interacts with Bcl10/CLAP and activates NFκB. J. Biol. Chem. 275: 41082-41086.
2. Wang, L., et al. 2001. CARD 10 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.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607212. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Kono, T., et al. 2003. Molecular cloning and expression analysis of a novel caspase recruitment domain protein (CARD) in common carp *Cyprinus carpio* L. Gene 309: 57-64.
5. Nakamura S., et al. 2005. Overexpression of caspase recruitment domain (CARD) membrane-associated guanylate kinase 1 (CARMA1) and CARD 9 in primary gastric B cell lymphoma. Cancer 104: 1885-1893.
6. Gross, O., et al. 2006. CARD 9 controls a non-TLR signalling pathway for innate anti-fungal immunity. Nature 442: 651-656.
7. Zhou, Y., et al. 2006. Distinct comparative genomic hybridisation profiles in gastric mucosa-associated lymphoid tissue lymphomas with and without t(11;18)(q21;q21). Br. J. Haematol. 133: 35-42.

CHROMOSOMAL LOCATION

Genetic locus: CARD9 (human) mapping to 9q34.3; Card9 (mouse) mapping to 2 A3.

SOURCE

CARD 9 (C-2) is a mouse monoclonal antibody raised against amino acids 98-187 mapping within an internal region of CARD 9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CARD 9 (C-2) is recommended for detection of CARD 9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CARD 9 siRNA (h): sc-60333, CARD 9 siRNA (m): sc-60334, CARD 9 shRNA Plasmid (h): sc-60333-SH, CARD 9 shRNA Plasmid (m): sc-60334-SH, CARD 9 shRNA (h) Lentiviral Particles: sc-60333-V and CARD 9 shRNA (m) Lentiviral Particles: sc-60334-V.

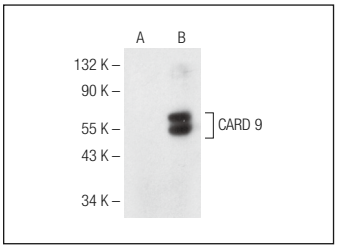
Molecular Weight of CARD 9: 62 kDa.

Positive Controls: CARD 9 (h): 293 Lysate: sc-174094.

RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CARD 9 (C-2): sc-374007. Western blot analysis of CARD 9 expression in non-transfected: sc-117760 (**A**) and human CARD 9 transfected: sc-174094 (**B**) 293 whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.