

CARD 9 (H-90): sc-99054

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 NF κ B activation. Overexpression of CARD 9 correlates with the development of gastric B cell lymphoma.

REFERENCES

- Bertin, J., et al. 2001. CARD 9 is a novel caspase recruitment domain-containing protein that interacts with Bcl10/CLAP and activates NF κ B. *J. Biol. Chem.* 275: 41082-41086.
- 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 NF κ B. *J. Biol. Chem.* 276: 21405-21409.
- 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/>
- 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.
- 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.
- Gross, O., et al. 2006. CARD 9 controls a non-TLR signalling pathway for innate anti-fungal immunity. *Nature* 442: 651-656.

CHROMOSOMAL LOCATION

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

SOURCE

CARD 9 (H-90) is a rabbit polyclonal antibody raised against amino acids 98-187 mapping within an internal region of CARD 9 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

CARD 9 (H-90) is recommended for detection of CARD 9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

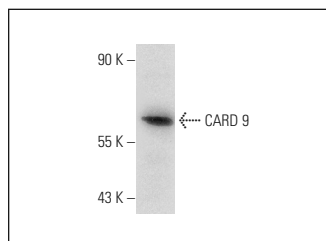
CARD 9 (H-90) is also recommended for detection of CARD 9 in additional species, including equine and canine.

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: THP-1 cell lysate: sc-2238.

DATA



CARD 9 (H-90): sc-99054. Western blot analysis of CARD 9 expression in THP-1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Gringhuis, S.I., et al. 2012. Dectin-1 is an extracellular pathogen sensor for the induction and processing of IL-1 β via a noncanonical caspase-8 inflammasome. *Nat. Immunol.* 13: 246-254.

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **CARD 9 (A-8): sc-374569** or **CARD 9 (C-2): sc-374007**, our highly recommended monoclonal alternatives to CARD 9 (H-90).