

## CARD 9 (A-8): sc-374569



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 NF $\kappa$ B activation. Overexpression of CARD 9 correlates with the development of gastric B-cell lymphoma.

## CHROMOSOMAL LOCATION

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

## SOURCE

CARD 9 (A-8) 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  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CARD 9 (A-8) is available conjugated to agarose (sc-374569 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374569 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374569 PE), fluorescein (sc-374569 FITC), Alexa Fluor<sup>®</sup> 488 (sc-374569 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374569 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374569 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374569 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374569 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374569 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CARD 9 (A-8) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

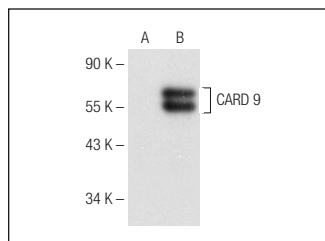
Molecular Weight of CARD 9: 62 kDa.

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

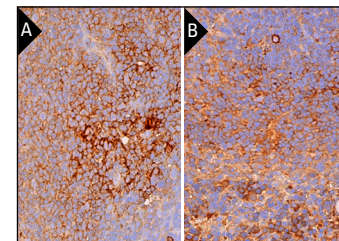
## STORAGE

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

## DATA



CARD 9 (A-8): sc-374569. Western blot analysis of CARD 9 expression in non-transfected: sc-110760 (A) and human CARD 9 transfected: sc-174094 (B) 293 whole cell lysates.



CARD 9 (A-8): sc-374569. Immunoperoxidase staining of formalin fixed, paraffin-embedded human (A) and mouse (B) spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

## SELECT PRODUCT CITATIONS

- Loh, J.T., et al. 2019. Dok3-protein phosphatase 1 interaction attenuates CARD 9 signaling and neutrophil-dependent antifungal immunity. *J. Clin. Invest.* 129: 2717-2729.
- Cao, M., et al. 2019. Dectin-1-induced RIPK1 and RIPK3 activation protects host against *Candida albicans* infection. *Cell Death Differ.* 26: 2622-2636.
- Chen, J., et al. 2020. TAGAP instructs Th17 differentiation by bridging Dectin activation to EPHB2 signaling in innate antifungal response. *Nat. Commun.* 11: 1913.
- Pan, L., et al. 2020. Caspase recruitment domain containing protein 9 suppresses non-small cell lung cancer proliferation and invasion via inhibiting MAPK/p38 pathway. *Cancer Res. Treat.* 52: 867-885.
- Xu, W., et al. 2020. USP15 deubiquitinates CARD 9 to downregulate C-type lectin receptor-mediated signaling. *Immunohorizons* 4: 670-678.
- Li, Y., et al. 2021. Rad50 promotes ovarian cancer progression through NF $\kappa$ B activation. *J. Cell. Mol. Med.* 25: 10961-10972.
- Lin, X., et al. 2022. *Astragalus mongholicus* Bunge and *Panax notoginseng* formula (A&P) improves renal mesangial cell damage in diabetic nephropathy by inhibiting the inflammatory response of infiltrated macrophages. *BMC Complement. Med. Ther.* 22: 17.
- Danne, C., et al. 2022. CARD 9 in neutrophils protects from colitis and controls mitochondrial metabolism and cell survival. *Gut*. E-published.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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