

# CARD 11 (A-4): sc-166910

## BACKGROUND

Modular protein interaction domains are an evolutionarily conserved protein contour feature in tertiary and quaternary protein folding that gives rise to a dynamic protein signaling network by mediating the assembly of encoded components into specific signaling complexes. Caspase-associated recruitment domain (CARD) proteins CARD 11 and CARD 14 are members of the membrane-associated guanylate kinase (MAGUK) family, a class of proteins that function as molecular scaffolds for the assembly of multiprotein complexes at the plasma membrane. The human CARD 11 gene maps to chromosome 7p22.2 and encodes a 1,147 amino acid protein. The human CARD 14 gene maps to chromosome 17q25 and encodes a 1,004 amino acid protein. CARD 11 and CARD 14 can function as components of signaling pathways that lead to activation of the transcription factor NFκB. The CARD domains of CARD 11 and CARD 14 can specifically interact with Bcl10, a protein known to function as a positive regulator of cell apoptosis and NFκB activation.

## REFERENCES

1. Inohara, N., et al. 1999. NOD1, an Apaf-1-like activator of caspase-9 and NFκB. *J. Biol. Chem.* 274: 14560-14567.
2. Pawson T. and Nash P. 2000. Protein-protein interactions define specificity in signal transduction. *Genes Dev.* 14: 1027-1047.
3. Gaide, O., et al. 2001. Carma1, a CARD-containing binding partner of Bcl10, induces Bcl10 phosphorylation and NFκB activation. *FEBS Lett.* 496: 121-127.
4. Bertin, J., et al. 2001. CARD11 and CARD14 are novel caspase recruitment domain (CARD)/membrane-associated guanylate kinase (MAGUK) family members that interact with BCL10 and activate NFκB. *J. Biol. Chem.* 276: 11877-11882.

## CHROMOSOMAL LOCATION

Genetic locus: CARD11 (human) mapping to 7p22.2; Card11 (mouse) mapping to 5 G2.

## SOURCE

CARD 11 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 848-1147 at the C-terminus of CARD 11 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CARD 11 (A-4) is available conjugated to agarose (sc-166910 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166910 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166910 PE), fluorescein (sc-166910 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166910 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166910 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166910 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166910 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166910 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166910 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

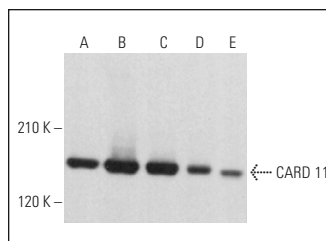
CARD 11 (A-4) is recommended for detection of CARD 11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 11 siRNA (h): sc-41994, CARD 11 siRNA (m): sc-44937, CARD 11 shRNA Plasmid (h): sc-41994-SH, CARD 11 shRNA Plasmid (m): sc-44937-SH, CARD 11 shRNA (h) Lentiviral Particles: sc-41994-V and CARD 11 shRNA (m) Lentiviral Particles: sc-44937-V.

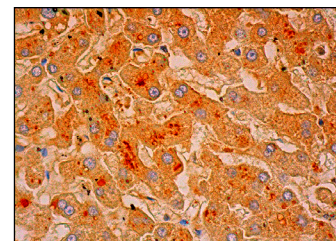
Molecular Weight of CARD 11: 133 kDa.

Positive Controls: Ramos cell lysate: sc-2216, CCRF-CEM cell lysate: sc-2225 or U-698-M whole cell lysate: sc-364799.

## DATA



CARD 11 (A-4): sc-166910. Western blot analysis of CARD 11 expression in CCRF-CEM (A), Ramos (B), U-698-M (C), COLO 205 (D) and IB4 (E) whole cell lysates.



CARD 11 (A-4): sc-166910. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

## SELECT PRODUCT CITATIONS

1. Nicolau, C.A., et al. 2020. TAK1 lessens the activity of the paracaspase MALT1 during T cell receptor signaling. *Cell. Immunol.* 353: 104115.
2. Oikawa, D., et al. 2020. Cellular and mathematical analyses of LUBAC involvement in T cell receptor-mediated NFκB activation pathway. *Front. Immunol.* 11: 601926.

## 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](http://www.scbt.com) for detailed protocols and support products.

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