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CARMA1 Antibody

Catalog # ASC10207

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9BXL7
Other Accession	Q9BXL7, 172046231
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	133284
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CARMA1 antibody can be used for detection of CARMA1 by Western blot at 0.5 to 2 g/mL. A band at approximately 125 kDa can be detected. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	84433
Other Names	CARMA1 Antibody: PPBL, BENTA, BIMP3, IMD11, CARMA1, Caspase recruitment domain-containing protein 11, CARD-containing MAGUK protein 1, Carma 1, caspase recruitment domain family, member 11
Target/Specificity	CARD11;
Reconstitution & Storage	CARMA1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CARMA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CARD11 {ECO:0000303|PubMed:11278692, ECO:0000312|HGNC:HGNC:16393}
Function	Adapter protein that plays a key role in adaptive immune response by transducing the activation of NF-kappa-B downstream of T- cell receptor (TCR) and B-cell receptor (BCR) engagement (PubMed:11278692, PubMed:11356195, PubMed:12356734). Transduces signals downstream TCR or BCR activation via the formation of a multiprotein complex together with BCL10 and MALT1 that induces NF-kappa-B and MAP kinase p38 (MAPK11,

	MAPK12, MAPK13 and/or MAPK14) pathways (PubMed:11356195). Upon activation in response to TCR or BCR triggering, CARD11 homooligomerizes to form a nucleating helical template that recruits BCL10 via CARD-CARD interaction, thereby promoting polymerization of BCL10 and subsequent recruitment of MALT1: this leads to I-kappa-B kinase (IKK) phosphorylation and degradation, and release of NF-kappa-B proteins for nuclear translocation (PubMed:24074955). Its binding to DPP4 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner (PubMed:17287217). Promotes linear ubiquitination of BCL10 by promoting the targeting of BCL10 to RNF31/HOIP (PubMed:27777308). Stimulates the phosphorylation of BCL10 (PubMed:11356195). Also activates the TORC1 signaling pathway (PubMed:28628108).
Cellular Location	Cytoplasm. Membrane raft. Note=Colocalized with DPP4 in membrane rafts.
Tissue Location	Detected in adult peripheral blood leukocytes, thymus, spleen and liver. Also found in promyelocytic leukemia HL-60 cells, chronic myelogenous leukemia K-562 cells, Burkitt's lymphoma Raji cells and colorectal adenocarcinoma SW480 cells. Not detected in HeLaS3, MOLT-4, A-549 and G431 cells.

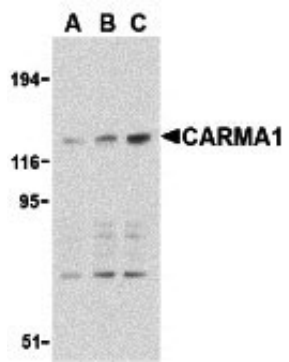
Background

CARMA1 Antibody: CARMA proteins belong to the membrane-associated guanylate kinase-like (MAGUK) family of proteins that can function as molecular scaffolds that assist assembly of signal transduction molecules. CARMA1, CARMA2, and CARMA3 share high degrees of sequence and functional homology, but their tissue-specific distribution suggests that they serve distinct biological functions in different cell types. Both CARMA1 and CARMA3 associate with NEMO, the regulatory subunit of the IκK complex, thereby regulating activation of the NF-κB transcription factor. Also, gene inactivation studies showed a complete block in T and B cell immunity as well as an impaired response to LPS, indicating that CARMA1 is a critical regulator in both the adaptive and innate immune systems.

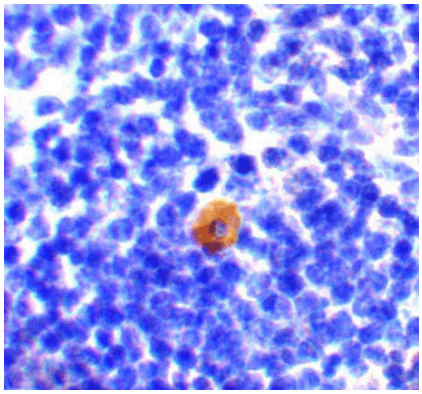
References

Fanning AS and Anderson JM. Protein modules as organizers of membrane structure.Curr. Opin. Cell Biol. 1999; 11:432-9.
Gaide O, Martinon F, Michau O, et al. Carma1, 1 CARD-containing binding partner of Bcl10, induces Bcl10 phosphorylation and NF-κ B activation. FEBS Lett. 2001; 496:121-7.
Bertin J, Wang L, Guo Y, et al. CARD11 and CARD14 are novel caspase recruitment domain (CARD)/membrane-associated guanylate kinase (MAGUK) family members that interact with BCL10 and activate NF-κ B. J. Biol. Chem. 2001; 276:11877-82.
McAllister-Lucas LM, Inohara N, Lucas PC, et al. Bimp1, a MAGUK family member linking protein kinase C activation to Bcl10-mediated NF-κB induction. J. Biol. Chem. 2001; 276:30589-97.

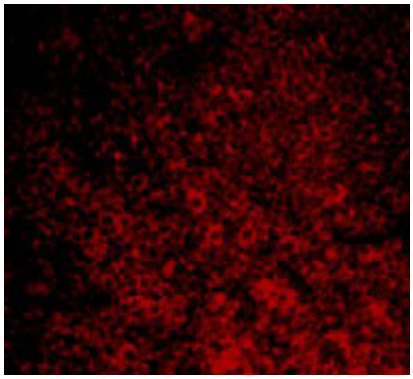
Images



Western blot analysis of CARMA1 expression in mouse thymus cell lysate with CARMA1 antibody at 0.5 (lane A), 1 (lane B), and 2 µg /ml (lane C), respectively.



Immunohistochemistry of CARMA1 in mouse thymus with CARMA1 antibody at 10 µg/mL.



Immunofluorescence of CARMA1 in Mouse Spleen cells with CARMA1 antibody at 20 µg/mL.

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