10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CARMA2 Antibody

Catalog # ASC10208

Product Information

Application	E, IHC-P
Primary Accession	Q9BXL6
Other Accession	NP_077015, 332801087
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	113270
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CARMA2 antibody can be used for detection of CARMA2 by immunohistochemistry at 5 □g/mL.

Additional Information

Gene ID	79092
Other Names	CARMA2 Antibody: PRP, PSS1, BIMP2, CARMA2, PSORS2, Caspase recruitment domain-containing protein 14, CARD-containing MAGUK protein 2, Carma 2, caspase recruitment domain family, member 14
Target/Specificity	CARD14; CARMA2 antibody is human specific. At least three isoforms of CARMA2 are known to exist; this antibody will only detect isoform 1. CARMA2 antibody is predicted not to cross-react with other CARMA proteins.
Reconstitution & Storage	CARMA2 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	CARMA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CARD14
Synonyms	CARMA2
Function	Acts as a scaffolding protein that can activate the inflammatory transcription factor NF-kappa-B and p38/JNK MAP kinase signaling pathways. Forms a signaling complex with BCL10 and MALT1, and activates MALT1 proteolytic activity and inflammatory gene expression. MALT1 is indispensable for CARD14-induced activation of NF-kappa-B and p38/JNK MAP kinases

	(PubMed:11278692, PubMed:21302310, PubMed:27071417, PubMed:27113748). May play a role in signaling mediated by TRAF2, TRAF3 and TRAF6 and protects cells against apoptosis.
Cellular Location	[Isoform 1]: Cytoplasm [Isoform 3]: Cytoplasm
Tissue Location	Isoform 1 is detected in placenta and epidermal keratinocytes (PubMed:22521418). Isoform 2 is detected in leukocytes and fetal brain (PubMed:22521418).

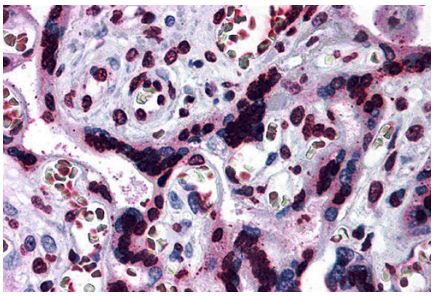
Background

CARMA2 Antibody: CARMA proteins belong to the membrane-associated guan-ylate 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. As with CARMA1, the CARD domain of CARMA2 has been shown to specifically interact with BCL10, a protein known to function as a positive regulator of cell apoptosis and NF-κB activation. When expressed in cells, this protein activated NF-κB and induced the phosphorylation of BCL10 Alternative splicing of CARMA2 results in isoforms that possess differential effects on NF-κB activation and endoplasmic reticulum stress-induced cell death.

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-kappa 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-kappa B. J. Biol. Chem. 2001; 276:11877-82.
Scudiero I, Zotti T, Ferravante A, et al. Alternative splicing of CARMA2/CARD14 transcripts generates protein variants with differential effect on NF-kB activation endoplasmic reticulum stress-induced cell death. J. Cell Physiol. 2011; 226:3121-31.

Images



Immunohistochemistry of CARMA2 in human placenta tissue with CARMA2 antibody at 5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.