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CARD9 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5985a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9H257
Other Accession	Q9EPY0, NP_434700.2, NP_434701.1
Reactivity	Human, Rat, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB27500
Calculated MW	62241
Antigen Region	23-52

Additional Information

Gene ID	64170
Other Names	Caspase recruitment domain-containing protein 9, hCARD9, CARD9
Target/Specificity	This CARD9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 23-52 amino acids from the N-terminal region of human CARD9.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CARD9 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CARD9 {ECO:0000303|PubMed:11053425, ECO:0000312|HGNC:HGNC:16391}
Function	Adapter protein that plays a key role in innate immune response against fungi by forming signaling complexes downstream of C- type lectin receptors

(PubMed:26961233, PubMed:33558980). CARD9- mediated signals are essential for antifungal immunity against a subset of fungi from the phylum Ascomycota (PubMed:24231284, PubMed:25057046, PubMed:25702837, PubMed:26521038, PubMed:26679537, PubMed:26961233, PubMed:27777981, PubMed:29080677, PubMed:33558980). Transduces signals in myeloid cells downstream of C-type lectin receptors CLEC7A (dectin-1), CLEC6A (dectin-2) and CLEC4E (Mincle), which detect pathogen- associated molecular pattern metabolites (PAMPs), such as fungal carbohydrates, and trigger CARD9 activation (By similarity). Upon activation, CARD9 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 activation of NF-kappa-B and MAP kinase p38 (MAPK11, MAPK12, MAPK13 and/or MAPK14) pathways which stimulate expression of genes encoding pro-inflammatory cytokines and chemokines (PubMed:11053425, PubMed:26488816, PubMed:26961233, PubMed:31296852, PubMed:33558980). CARD9 signaling in antigen-presenting cells links innate sensing of fungi to the activation of adaptive immunity and provides a cytokine milieu that induces the development and subsequent of interleukin 17-producing T helper (Th17) cells (PubMed:24231284). Also involved in activation of myeloid cells via classical ITAM- associated receptors and TLR: required for TLR-mediated activation of MAPK, while it is not required for TLR-induced activation of NF-kappa-B (By similarity). CARD9 can also be engaged independently of BCL10: forms a complex with RASGRF1 downstream of C-type lectin receptors, which recruits and activates HRAS, leading to ERK activation and the production of cytokines (By similarity). Acts as an important regulator of the intestinal commensal fungi (mycobiota) component of the gut microbiota (PubMed:33548172). Plays an essential role in antifungal immunity against dissemination of gut fungi: acts by promoting induction of antifungal IgG antibodies response in CX3CR1(+) macrophages to confer protection against disseminated C.albicans or C.auris infection (PubMed:33548172). Also mediates immunity against other pathogens, such as certain bacteria, viruses and parasites; CARD9 signaling is however redundant with other innate immune responses (By similarity). In response to L.monocytogenes infection, required for the production of inflammatory cytokines activated by intracellular peptidoglycan: acts by connecting NOD2 recognition of peptidoglycan to downstream activation of MAP kinases (MAPK) without activating NF- kappa-B (By similarity).

Cellular Location

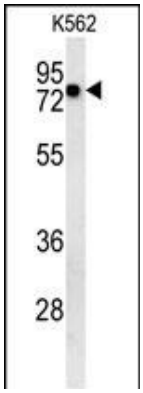
Cytoplasm

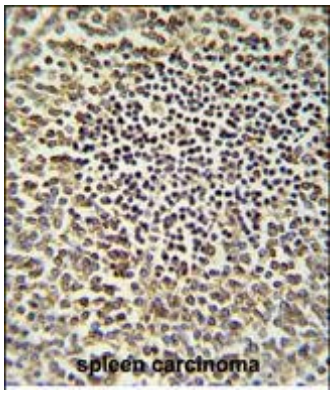
Tissue Location

Expression is restricted to several populations of phagocytes, such as macrophages, monocytes, and dendritic cells (PubMed:33548172). Highly expressed in spleen (PubMed:11053425). Also detected in liver, placenta, lung, peripheral blood leukocytes and in brain (PubMed:11053425).

Images

CARD9 Antibody (N-term) (Cat. #AP5985a) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the CARD9 antibody detected the CARD9 protein (arrow).





CARD9 antibody (N-term) (Cat. #AP5985a) immunohistochemistry analysis in formalin fixed and paraffin embedded human spleen carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CARD9 antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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