

CARD8 Rabbit pAb

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Catalog # AP58589

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9Y2G2
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60652
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CARD8
Epitope Specificity	221-320/431
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Inhibits NF-kappa-B activation. May participate in a regulatory mechanism that coordinates cellular responses controlled by NF-kappa-B transcription factor. May be a component of the inflammasome, a protein complex which also includes PYCARD, NALP2 and CASP1 and whose function would be the activation of proinflammatory caspases.

Additional Information

Gene ID	22900
Other Names	Caspase recruitment domain-containing protein 8, 3.4.-., CARD-inhibitor of NF-kappa-B-activating ligand, CARDINAL, Tumor up-regulated CARD-containing antagonist of CASP9, TUCAN, Caspase recruitment domain-containing protein 8, C-terminus, CARD8-CT, Caspase recruitment domain-containing protein 8, N-terminus, CARD8-NT, CARD8 {ECO:0000303 PubMed:11821383, ECO:0000312 HGNC:HGNC:17057}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CARD8 {ECO:0000303 PubMed:11821383, ECO:0000312 HGNC:HGNC:17057}
Function	Inflammasome sensor, which mediates inflammasome activation in response to various pathogen-associated signals, leading to subsequent pyroptosis of CD4(+) T-cells and macrophages (PubMed:11408476, PubMed:11821383, PubMed:15030775, PubMed:32051255, PubMed:32840892, PubMed:33542150, PubMed:34019797, PubMed:36357533). Inflammasomes are supramolecular complexes that assemble in the cytosol in response to pathogens and other damage-associated signals and play critical roles in innate immunity and inflammation (PubMed:11408476, PubMed:11821383, PubMed:15030775, PubMed:36357533). Acts as a recognition receptor (PRR): recognizes specific pathogens and other damage-associated signals, such as HIV-1 protease activity or Val- boroproline inhibitor, and mediates CARD8 inflammasome activation (PubMed:32840892, PubMed:33542150, PubMed:36357533). In response to pathogen-associated signals, the N-terminal part of CARD8 is degraded by the proteasome, releasing the cleaved C-terminal part of the protein (Caspase recruitment domain-containing protein 8, C-terminus), which polymerizes to initiate the formation of the inflammasome complex: the CARD8 inflammasome directly recruits pro-caspase-1 (proCASP1) independently of PYCARD/ASC and promotes caspase-1 (CASP1) activation, which subsequently cleaves and activates inflammatory cytokines IL1B and IL18 and gasdermin-D (GSDMD), leading to pyroptosis (PubMed:32051255, PubMed:32840892, PubMed:33053349, PubMed:33542150, PubMed:36357533). Ability to sense HIV-1 protease activity leads to the clearance of latent HIV-1 in patient CD4(+) T-cells after viral reactivation; in contrast, HIV-1 can evade CARD8-sensing when its protease remains inactive in infected cells prior to viral budding (PubMed:33542150). Also acts as a negative regulator of the NLRP3 inflammasome (PubMed:24517500). May also act as an inhibitor of NF- kappa-B activation (PubMed:11551959, PubMed:12067710).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	High expression in lung, ovary, testis and placenta (PubMed:11551959). Lower expression in heart, kidney and liver (PubMed:11551959). Also expressed in spleen, lymph node and bone marrow (PubMed:11821383).

Background

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