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# CARD8 Rabbit pAb

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Catalog # AP58589

## Product Information

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| **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

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| **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

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| **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- boroPro 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

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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