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CARD8 / Cardinal / TUCAN Antibody (C-Terminus)

Rabbit Polyclonal Antibody
Catalog # ALS11403

Specification

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - Product Information

Application	**ICC, IF, IHC**
Primary Accession	Q9Y2G2
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**49kDa KDa**

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - Additional Information

Gene ID 22900

Other Names
Caspase recruitment domain-containing protein 8, Apoptotic protein NDPP1, CARD-inhibitor of NF-kappa-B-activating ligand, CARDINAL, DACAR, Tumor up-regulated CARD-containing antagonist of CASP9, TUCAN, CARD8, KIAA0955, NDPP1

Target/Specificity
synthetic peptide corresponding to amino acids at the C-terminus of human CARD8

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
CARD8 / Cardinal / TUCAN Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - 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:11821383, PubMed:11408476, PubMed:15030775, PubMed:32840892, PubMed:32051255, 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:11821383, PubMed:11408476, 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:33053349, PubMed:32840892, PubMed:32051255, 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).

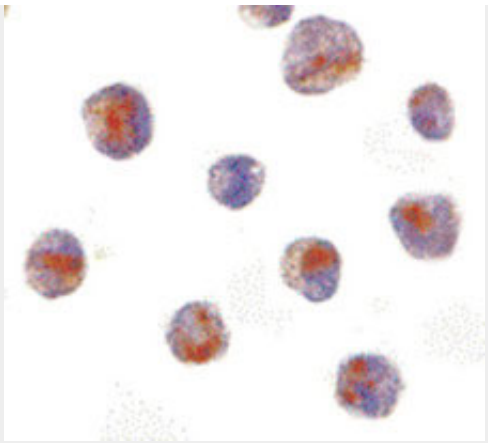
CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

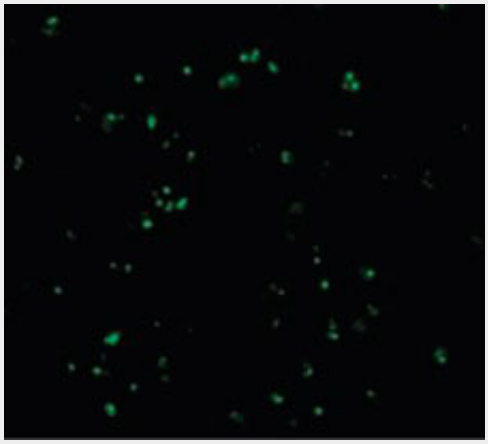
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - Images

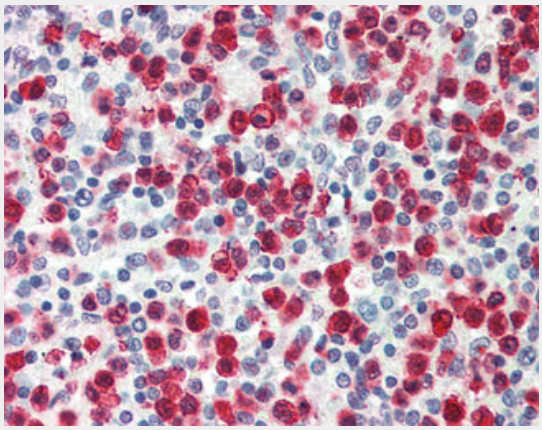
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Immunocytochemistry of CARD8 in K562 cells with CARD8 antibody at 10 ug/ml.



Immunofluorescence of CARD8 in K562 cells with CARD8 antibody at 20 ug/ml.



Anti-CARD8 antibody IHC of human spleen.

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - Background

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.

CARD8 / Cardinal / TUCAN Antibody (C-Terminus) - References

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Razmara M.,et al.J. Biol. Chem. 277:13952-13958(2002).
Zhang H.,et al.Int. J. Oncol. 20:1035-1040(2002).
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Bouchier-Hayes L.,et al.J. Biol. Chem. 276:44069-44077(2001).