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

CARD8 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP9863a

Specification

CARD8 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9Y2G2

CARD8 Antibody (N-term) Blocking Peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CARD8 Antibody (N-term) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/36357533"

target="_blank">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 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

CARD8 Antibody (N-term) Blocking Peptide - Images

CARD8 Antibody (N-term) Blocking Peptide - Background

CARD8 encoded by this gene belongs to the caspase recruitment domain (CARD)-containing family of proteins, which are involved in pathways leading to activation of caspases or nuclear factor kappa-B (NFKB). This protein may be a component of the inflammasome, a protein complex that plays a role in the activation of proinflammatory caspases. It is thought that this protein acts as an adaptor molecule that negatively regulates NFKB activation, CASP1-dependent IL1B secretion, and apoptosis. Polymorphisms in this gene may be associated with a susceptibility to rheumatoid arthritis.

CARD8 Antibody (N-term) Blocking Peptide - References

Hassan, M., et al. Cell. Oncol. 31(6):437-456(2009)Mockelmann, N., et al. BMC Gastroenterol 9, 79

(2009) Checinska, A., et al. BMC Cancer 6, 166 (2006) Agostini, L., et al. Immunity 20(3):319-325(2004)Stilo, R., et al. FEBS Lett. 521 (1-3), 165-169 (2002)