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TUCAN/CARD8 Blocking Peptide
Catalog # PBV10329b

Specification

TUCAN/CARD8 Blocking Peptide - Product Information

Primary Accession	Q9Y2G2
Gene ID	22900
Calculated MW	60652

TUCAN/CARD8 Blocking Peptide - Additional Information

Gene ID 22900

Application & Usage	**The peptide is used for blocking the antibody activity of TUCAN. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30 minutes at 37°C.**

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
TUCAN/CARD8

Formulation
50 µg (0.2 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 0.1% BSA and 0.02% sodium azide.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TUCAN/CARD8 Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

TUCAN/CARD8 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: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).

TUCAN/CARD8 Blocking Peptide - 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

TUCAN/CARD8 Blocking Peptide - Images