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TUCAN/CARD8 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10538

Specification

TUCAN/CARD8 Antibody - Product Information

Application	**WB**
Primary Accession	Q9Y2G2
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**60652**

TUCAN/CARD8 Antibody - Additional Information

Gene ID 22900

Application & Usage	**Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually. The antibody detects 47 kDa TUCAN in samples from human, mouse, and rat origins. Jurkat cell lysate, mouse small intestine and rat kidney tissue lysates can be used as positive controls.**

Other Names
DACAR , NDPP1 , TUCAN , CARDINAL , KIAA0955 , MGC57162 , DKFZp779L0366

Target/Specificity
TUCAN

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2 mg/ml) Protein A affinity purified rabbit anti-TUCAN polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5 BSA and 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

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

TUCAN/CARD8 Antibody - 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- 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).

TUCAN/CARD8 Antibody - 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 Antibody - Images

TUCAN/CARD8 Antibody - Background

TUCAN (Tumor Up-regulated Card-containing Antagonist of Caspase-Nine) is a CARD (Caspase-Associated Recruitment Domains) containing protein that binds and suppresses activation of pro-Caspase-9 and found to be overexpressed in some types of cancers. TUCAN binds specifically to pro-caspase-9 and interferes with its interaction with Apaf-1, thereby suppressing apoptosis signaling in the mitochondrial/cytochrome c pathway.