NLRP3 Rabbit pAb

CatalogNo: YT5382

Key Features

Host Species	Reactivity	Applications
• Rabbit	• Human,Mouse,Rat	• WB,IHC,IF,ELISA

MW	Isotype
• 115kD (Observed)	• IgG

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC: 1:100-1:300
ELISA 1:20000
IF 1:50-200

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from the Internal region of human NLRP3. AA range:511-560
Specificity	Cryopyrin Polyclonal Antibody detects endogenous levels of Cryopyrin protein.

Target Information

Gene name NLRP3

Protein Name NACHT LRR and PYD domains-containing protein 3

Organism	Gene ID	UniProt ID
Human	114548;	Q96P20;
Mouse		Q8R4B8;

Cellular Localization Cytoplasm, cytosol . Inflammasome . Endoplasmic reticulum . Secreted . Nucleus . In macrophages, under resting conditions, mainly located in the cytosol, on the endoplasmic reticulum. After stimulation with inducers of the NLRP3 inflammasome, mitochondria redistribute in the vicinity of the endoplasmic reticulum in the perinuclear region, which results in colocalization of NLRP3 on the endoplasmic reticulum and PYCARD on mitochondria, allowing the activation of inflammasome assembly. After the induction of pyroptosis, inflammasome specks are released into the extracellular space where they can further promote IL1B processing and where they can be engulfed by macrophages. Phagocytosis induces lysosomal damage and inflammasome activation in the recipient cells (PubMed:24952504). In the Th2 subset of CD4(+) helper T-cells, mainly located in the nucleus. Nuclear localization depends upon KPNA2. In the Th1 subset of CD4(+) helper T-cells, mainly cytoplasmic (By similarity). .; Golgi apparatus membrane. (Microbial infection) Upon HRSV infection, the protein is mainly located in lipid rafts in the Golgi membrane. .

Tissue specificity Predominantly expressed in macrophages (PubMed:33231615, PubMed:34133077). Also expressed in dendritic cells, B- and T-cells (at protein level) (PubMed:11786556) (PubMed:17164409). Expressed in LPS-treated granulocytes, but not in resting cells (at protein level) (PubMed:17164409). Expression in monocytes is very weak (at protein level) (PubMed:17164409). Expressed in stratified non-keratinizing squamous epithelium, including oral, esophageal and ectocervical mucosa and in the Hassall's corpuscles in the thymus. Also, detected in the stratified epithelium covering the bladder and ureter (transitional mucosa) (at protein level) (PubMed:17164409). Expressed in lung epithelial cells (at protein level) (PubMed:23229815). Expressed in chondrocytes (PubMed:12032915). Expressed at low levels in resting osteoblasts (PubMed:17907925).

Function	Disease:Defects in NLRP3 are a cause of Muckle-Wells syndrome (MWS) [MIM:191900]; also known as urticaria-deafness-amyloidosis syndrome. MWS is a hereditary periodic fever syndrome characterized by fever, chronic recurrent urticaria, arthralgias, progressive sensorineural deafness, and reactive renal amyloidosis. The disease may be severe if generalized amyloidosis occurs.,Disease:Defects in NLRP3 are the cause of chronic infantile neurologic cutaneous and articular syndrome (CINCA) [MIM:607115]; also known as 'neonatal onset multisystem inflammatory disease,' or NOMID, a rare congenital inflammatory disorder characterized by a triad of neonatal onset of cutaneous symptoms, chronic meningitis, and joint manifestations with recurrent fever and inflammation.,Disease:Defects in NLRP3 are the cause of familial cold autoinflammatory syndrome type 1 (FCAS1) [MIM:120100]; commonly known as familial cold urticaria. FCAS are rare autosomal dominant systemic inflammatory diseases characterized by episodes of rash, arthralgia, fever and conjunctivitis after generalized exposure to cold.,Function:May function as an inducer of apoptosis. Interacts selectively with ASC and this complex may function as an upstream activator of NF-kappa-B signaling. Inhibits TNF-alpha induced activation and nuclear translocation of RELA/NF-KB p65. Also inhibits transcriptional activity of RELA. Activates caspase-1 in response to a number of triggers including bacterial or viral infection which leads to processing and release of IL1B and IL18.,induction:By TNF-alpha.,online information:Repertory of FMF and hereditary autoinflammatory disorders mutations,similarity:Belongs to the NLRP family.,similarity:Contains 1 DAPIN domain.,similarity:Contains 1 NACHT domain.,similarity:Contains 7 LRR (leucine-rich) repeats.,subunit:Interacts with PYCARD/ASC. Part of the NALP3 inflammasome complex which is involved in activation of caspase-1 and caspase-5, leading to processing of IL1B and IL18.,tissue specificity:Expressed in blood leukocytes. Strongly expressed in polymorphonuclear cells and osteoblasts. Undetectable or expressed at a lower magnitude in B- and T-lymphoblasts, respectively. High level of expression detected in chondrocytes. Detected in non-keratinizing epithelia of oropharynx, esophagus and ectocervix and in the urothelial layer of the bladder.,

Validation Data

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