

Datasheet for ABIN3044250
anti-NLRP3 antibody (N-Term)

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Overview

Quantity:	100 µg
Target:	NLRP3
Binding Specificity:	AA 12-31, N-Term
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This NLRP3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Purpose:	Rabbit IgG polyclonal antibody for NACHT, LRR and PYD domains-containing protein 3(NLRP3) detection. Tested with WB, IHC-P in Human,Mouse,Rat.
Immunogen:	A synthetic peptide corresponding to a sequence at the N-terminus of human CIAS1(12-31aa RYLEDLEDVDLKKFKMHLED), different from the related rat and mouse sequences by one amino acid.
Sequence:	RYLEDLEDVD LKKFKMHLED
Isotype:	IgG
Cross-Reactivity (Details):	Predicted Cross Reactivity: mouse No cross reactivity with other proteins. Predicted Cross Reactivity: Species predicted to be fit for the product based on sequence similarities.

Product Details

Characteristics: Rabbit IgG polyclonal antibody for NACHT, LRR and PYD domains-containing protein 3(NLRP3) detection. Tested with WB, IHC-P in Human,Mouse,Rat.
Gene Name: NLR family, pyrin domain containing 3
Protein Name: NACHT, LRR and PYD domains-containing protein 3

Purification: Immunogen affinity purified.

Target Details

Target: NLRP3

Alternative Name: NLRP3 ([NLRP3 Products](#))

Background: NLRP3(NLR FAMILY, PYRIN DOMAIN-CONTAINING 3), also known as CIAS1, CRYOPYRIN, NALP3 or PYPAF1, is a protein that in humans is encoded by the NLRP3(NOD-like receptor family, pyrin domain containing 3) gene. The NLRP3 gene encodes a pyrin-like protein expressed predominantly in peripheral blood leukocytes. And the NLRP3 gene is mapped on 1q44. NLRP3 interacts with apoptosis-associated speck-like protein containing a CARD(ASC). The encoded protein may play a role in the regulation of inflammation and apoptosis. Mutation of the NALP3 nucleotide-binding domain reduced ATP binding, CASP1 activation, IL1B production, cell death, macromolecular complex formation, self-association, and association with ASC. Consistent with an essential role for Nlrp3 inflammasomes in antifungal immunity, Gross et al.showed that Nlrp3-deficient mice are hypersusceptible to *C. albicans* infection. Activation of the NLRP3 inflammasome in response to virus or to RNA was dependent upon lysosomal maturation and reactive oxygen species production in human cells. The NLRP3 inflammasome senses obesity-associated danger signals and contributes to obesity-induced inflammation and insulin resistance.

Synonyms: AGTAVPRL antibody|AII/AVP antibody|Angiotensin/vasopressin receptor AII/AVP like antibody|Angiotensin/vasopressin receptor AII/AVP-like antibody|C1orf7 antibody|Caterpillar protein 1.1 antibody|CIAS 1 antibody|CIAS1 antibody|CLR1.1 antibody|Cold autoinflammatory syndrome 1 antibody|Cold autoinflammatory syndrome 1 protein antibody|Cryopyrin antibody|Familial cold autoinflammatory syndrome antibody|FCAS antibody|FCU antibody|LRR and PYD domains-containing protein 3 antibody|Muckle-Wells syndrome antibody|MWS antibody|NACHT antibody|NACHT LRR and PYD containing protein 3 antibody|NALP 3 antibody|NALP3 antibody|NALP3_HUMAN antibody|NLRP3 antibody|PYPAF 1 antibody|PYPAF1 antibody|PYRIN containing APAF1 like protein 1 antibody|PYRIN-containing APAF1-like protein 1 antibody

Target Details

UniProt:	Q96P20
Pathways:	Cellular Response to Molecule of Bacterial Origin , Positive Regulation of Endopeptidase Activity , Inflammasome

Application Details

Application Notes:	WB: Concentration: 0.1-0.5 µg/mL, Tested Species: Human IHC-P: Concentration: 0.5-1 µg/mL, Tested Species: Human, Rat, Predicted Species: Mouse, Epitope Retrieval by Heat: Boiling the paraffin sections in 10 mM citrate buffer, pH 6.0, for 20 mins is required for the staining of formalin/paraffin sections. Notes: Tested Species: Species with positive results. Predicted Species: Species predicted to be fit for the product based on sequence similarities. Other applications have not been tested. Optimal dilutions should be determined by end users.
Comment:	Antibody can be supported by chemiluminescence kit ABIN921124 in WB, supported by ABIN921231 in IHC(P).
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , 0.05 mg Thimerosal, 0.05 mg Sodium azide.
Preservative:	Thimerosal (Merthiolate), Sodium azide
Precaution of Use:	This product contains Sodium azide and Thimerosal (Merthiolate): POISONOUS AND HAZARDOUS SUBSTANCES which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.
Expiry Date:	12 months

Publications

Product cited in:

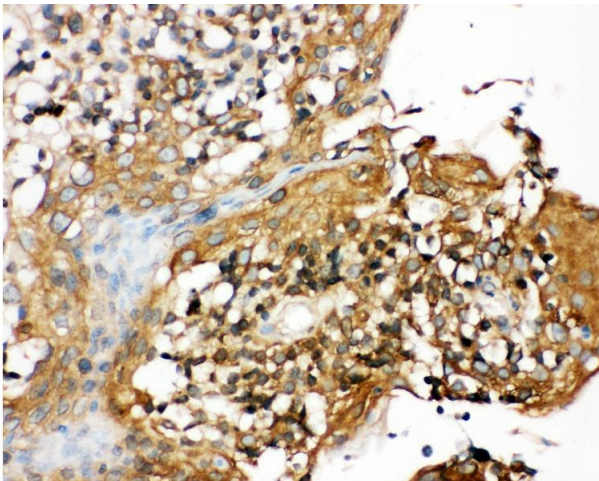
Zhang, Li, Xu, Xiang, Ma: "Luteolin alleviates NLRP3 inflammasome activation and directs macrophage polarization in lipopolysaccharide-stimulated RAW264.7 cells." in: **American journal of translational research**, Vol. 10, Issue 1, pp. 265-273, (2018) ([PubMed](#)).

Wang, Zhang, Zhang, Wang, Ma, Zhu, Du: "Alcohol intake aggravates adipose browning and muscle atrophy in cancer-associated cachexia." in: **Oncotarget**, Vol. 8, Issue 59, pp. 100411-100420, (2017) ([PubMed](#)).

Xue, Wang, Du, Zhu: "Maternal obesity induces gut inflammation and impairs gut epithelial barrier function in nonobese diabetic mice." in: **The Journal of nutritional biochemistry**, Vol. 25, Issue 7, pp. 758-64, (2014) ([PubMed](#)).

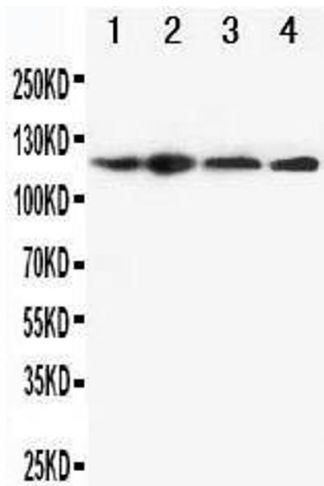
Wang, Yang, Liang, Zhu, Du: "Grape seed extract prevents skeletal muscle wasting in interleukin 10 knockout mice." in: **BMC complementary and alternative medicine**, Vol. 14, pp. 162, (2014) ([PubMed](#)).

Images



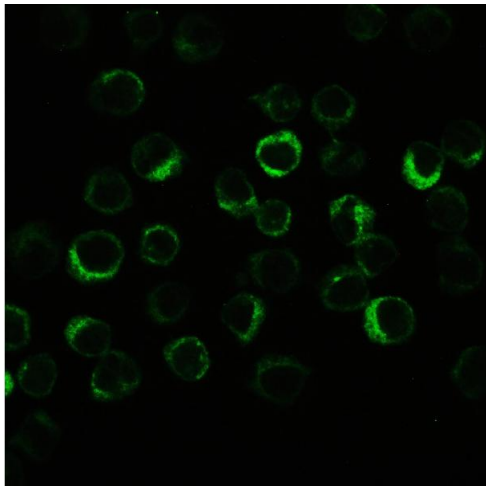
Immunohistochemistry

Image 1. Anti-CIAS1/NALP3 antibody, IHC(P) IHC(P):
Human Tonsil Tissue



Western Blotting

Image 2. Anti-CIAS1/NALP3 antibody, Western blotting
Lane 1: HEP-2 Cell Lysate Lane 2: A549 Cell Lysate Lane 3:
U87 Cell Lysate Lane 4: CEM Cell Lysate



Immunohistochemistry

Image 3. IHC analysis of CIAS1/NALP3 using anti-CIAS1/NALP3 antibody . CIAS1/NALP3 was detected in immunocytochemical section of THP-1 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/ml rabbit anti-CIAS1/NALP3 Antibody overnight at 4°C. DyLight®488 Conjugated Avidin was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1094) with DAB as the chromogen.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN3044250.