

Basic Information

Product Name	Anti-NLRP3 Antibody
Gene Name	NLRP3
Source	Rabbit
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, FCM, ELISA
Contents	500 ug/ml antibody with PBS , 0.02% Na ₂ S ₂ O ₃ , 1 mg BSA and 50% glycerol.
Immunogen	E.coli-derived human CIAS1/NALP3/NLRP3 recombinant protein (Position: D812-S1035).
concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	118KD
Dilution Ratios	Western blot(WB): 1:500-2000 Flow cytometry (FCM):1-3 µg/1x10 ⁶ cells ELISA: 1:100-1000

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

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.

Selected Validation Data

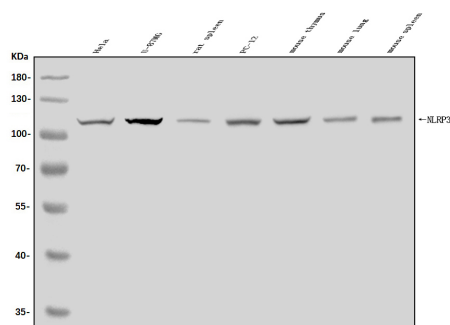


Figure 1. Western blot analysis of anti- NLRP3 antibody (A00034-2). The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human HELA whole cell lysates, Lane 2: human U-87MG whole cell lysates, Lane 3: rat spleen tissue lysates, Lane 4: Rat PC-12 whole cell lysates, Lane 5: mouse thymus tissue lysates, Lane 6: mouse lung tissue lysates, Lane 7: mouse spleen tissue lysates. Use rabbit anti- NLRP3 1:1000, probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for NLRP3 at approximately 118KD. The expected band size for NLRP3 is at 118KD.

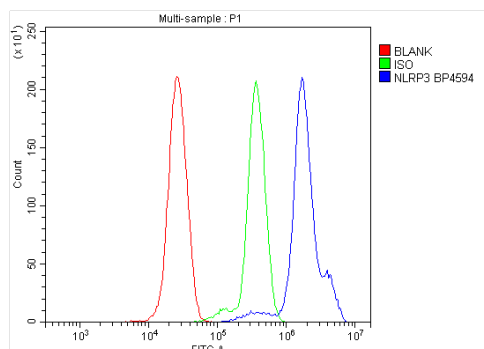


Figure 2. Flow cytometry analysis of THP-1 cell (1x10⁶) DyLight 488 conjugated goat anti- rabbit IgG(blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).