

NLR Family, Pyrin Domain Containing Protein 3 (NLRP3) Active Protein | NLRP3 active protein

Active NLR Family, Pyrin Domain Containing Protein 3 (NLRP3)

CATALOG # AAA161932	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

NLR Family; Pyrin Domain Containing Protein 3 (NLRP3); Active NLR Family; Pyrin Domain Containing Protein 3; AVP; AGTAVPRL; AII; AII/AVP; C1orf7; CIAS1; CLR1.1; FCAS; FCU; MWS; NALP3; PYPAF1; Cryopyrin; Cold Induced Autoinflammatory Syndrome 1; Caterpillar-Like Receptor 1.14; NLRP3 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Cys671~Trp 1033
Applicable Applications for NLRP3 active protein	Activity Assay, Cell Culture
Species	Mouse
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.1
Research Area	Signal transduction
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES



Bioactivity

NLR Family, Pyrin Domain Containing Protein 3 (NLRP3), also known as NALP3, CIAS1, PYPAF or Cryopyrin, is a cytosolic multiprotein complex composed of the innate immune receptor protein NLRP3, adapter protein ASC, and inflammatory protease caspase-1 that responds to microbial infection, endogenous danger signals, and environmental stimuli. Aberrant activation of the NLRP3 inflammasome is associated with the pathogenesis of various inflammatory diseases, such as diabetes, cancer, and Alzheimer's disease. Interleukin 1 Beta (IL1b) can interact with NLRP3, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse NLRP3 and recombinant chicken IL1b. Briefly, NLRP3 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to IL1b-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-NLRP3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 degree C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 uL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant mouse NLRP3 and recombinant chicken IL1b was shown in Figure 1, the EC50 for this effect is 0.16 ug/mL.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for NLRP3 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	22003870
NCBI GeneID	216799
NCBI Accession #	NP_665826.1
NCBI GenBank Nucleotide #	NM_145827.3
UniProt Accession #	T1W2H6; Q1JQ87; Q1JQ88; Q6JEL0; Q8R4B8
Molecular Weight	118,275 Da
NCBI Official Full Name	NACHT, LRR and PYD domains-containing protein 3
NCBI Official Synonym Full Names	NLR family, pyrin domain containing 3
NCBI Official Symbol	Nlrp3
NCBI Official Synonym Symbols	FCU; MWS; FCAS; Cias1; Mmig1; NALP3; Pypaf1; AII/AVP; AGTAVPRL
NCBI Protein Information	NACHT, LRR and PYD domains-containing protein 3; cryopyrin; PYRIN-containing APAF1-like protein 1; cold autoinflammatory syndrome 1 homolog; mast cell maturation inducible protein 1; NACHT/LRR/pyrin domain-containing protein 3; cold autoinflammatory syndr
UniProt Protein Name	NACHT, LRR and PYD domains-containing protein 3
UniProt Gene Name	Nlrp3
UniProt Synonym Gene Names	Cias1; Mmig1; Nalp3; Pypaf1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.