

APK115Mu01 100µg

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

Organism Species: *Mus musculus (Mouse)*

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Cys671~Trp1033

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 6.1

Predicted Molecular Mass: 43.9kDa

Accurate Molecular Mass: 44kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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          CHRVKTLSLG FFHNSPKEEE EERRGGRPLD
QVQCVFPDTH VACSSRLVNC CLTSSFGRGL FSSLSTNRSI TELDLSNTL
GDPGMRVLCE ALQHPGCNIQ RLWLGRCGLS HQCCFDISSV LSSSQKLVEL
DLSDNALGDF GIRLLCVGLK HLLCNLQKLW LVSCCLTSAC CQDLALVLSS
NHSLTRLYIG ENALGDSGVQ VLCEKMKDPQ CNLQKLGLVN SGLTSICCSA
LTSVLKTNQN FTHLYLRSNA LGDTGLRLLC ELLHPDCKL QMLELDNCSL
TSHSCWNLST ILTHNHSRKR LNLGNDLGD LCVVTLCEVL KQQGCLLQSL
QLGMYLNRE TKRALEALQE EKPELTIVFE ISW
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[ACTIVITY]

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 µl were then transferred to IL1b-coated microtiter wells and incubated for 1h at 37 °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 °C , wells were

aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 µL 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 µg/mL.

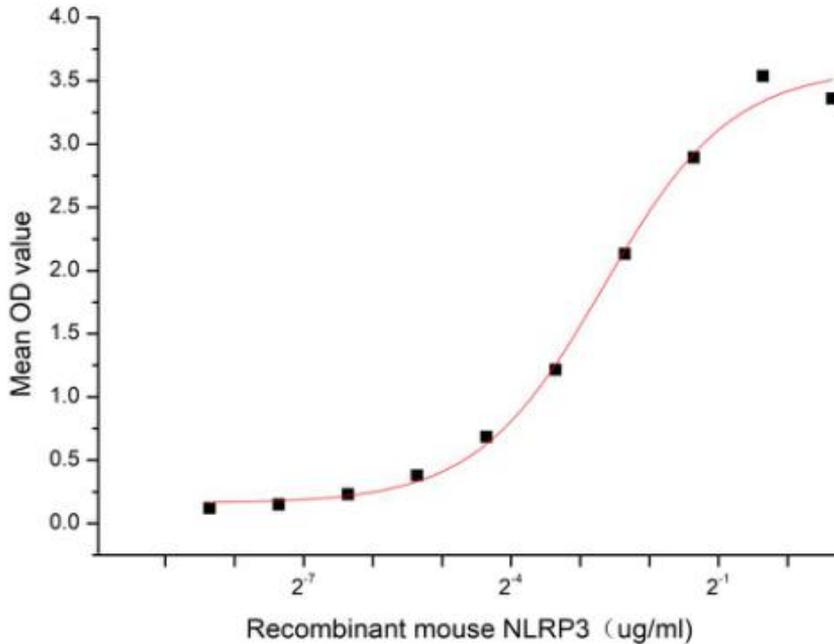


Figure 1. The binding activity of recombinant mouse NLRP3 and recombinant chicken IL1b

[IDENTIFICATION]

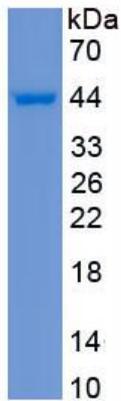


Figure 2. SDS-PAGE

Sample: Active recombinant NLRP3, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.