SANTA CRUZ BIOTECHNOLOGY, INC.

# NLRC5 (B-10): sc-515668

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The leucine-rich repeat (LRR) is a 20-30 amino acid motif that forms a hydrophobic $\alpha/\beta$ horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. NLRC5, also known as NOD4 or NOD27, is a 1,866 amino acid cytoplasmic protein that contains one NACHT domain and 26 LRRs. NLRC5 is thought to function as a regulator of the NFκB and type I/II interferon signaling pathways. Other roles of NLRC5 include control of innate immunity and antiviral defense. NLRC5 is expressed in brain, lung, thymus, heart, spleen and prostate and exists as six alternatively spliced isoforms. The gene encoding NLRC5 maps to human chromosome 16q13.

## REFERENCES


1. Kobe, B., et al. 1994. The leucine-rich repeat: a versatile binding motif. Trends Biochem. Sci. 19: 415-421.
2. Kobe, B., et al. 1995. Proteins with leucine-rich repeats. Curr. Opin. Struct. Biol. 5: 409-416.


## CHROMOSOMAL LOCATION

Genetic locus: NLRC5 (human) mapping to 16q13; Nlrc5 (mouse) mapping to 8 C4.

## SOURCE

NLRC5 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 41-64 near the N-terminus of NLRC5 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

NLRC5 (B-10) is recommended for detection of NLRC5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NLRC5 siRNA (h): sc-93466, NLRC5 shRNA Plasmid (h): sc-93466-SH and NLRC5 shRNA (h) Lentiviral Particles: sc-93466-V.

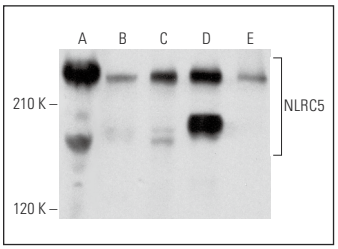
Molecular Weight of NLRC5 isoforms: 212/154 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370, SP2/0 whole cell lysate: sc-364795 or TK-1 whole cell lysate: sc-364798.

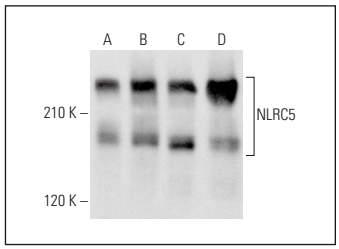
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




NLRC5 (B-10): sc-515668. Western blot analysis of NLRC5 expression in TK-1 (**A**), I-11.15 (**B**), SP2/0 (**C**), AMJ2-C8 (**D**) and MH-S (**E**) whole cell lysates.




NLRC5 (B-10): sc-515668. Western blot analysis of NLRC5 expression in Jurkat (**A**), K-562 (**B**), HEL 92.1.7 (**C**) and CCRF-CEM (**D**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Luan, P., et al. 2017. NLRC5 deficiency ameliorates diabetic nephropathy through alleviating inflammation. FASEB J. 32: 1070-1084.
2. Wang, S., et al. 2018. Knockdown of NLRC5 inhibits renal fibroblast activation via modulating TGF-β1/Smad signaling pathway. Eur. J. Pharmacol. 829: 38-43.
3. Periyasamy, P., et al. 2019. HIV-1 Tat-mediated microglial inflammation involves a novel miRNA-34a-NLRC5-NFκB signaling axis. Brain Behav. Immun. 80: 227-237.
4. Liu, Z., et al. 2020. LncRNA MALAT1 prevents the protective effects of miR-125b-5p against acute myocardial infarction through positive regulation of NLRC5. Exp. Ther. Med. 19: 990-998.
5. Deng, Y., et al. 2021. The regulatory NOD-like receptor NLRC5 promotes ganglion cell death in ischemic retinopathy by inducing microglial pyroptosis. Front. Cell Dev. Biol. 9: 669696.
6. Zhan, L., et al. 2022. LC3 and NLRC5 interaction inhibits NLRC5-mediated MHC class I antigen presentation pathway in endometrial cancer. Cancer Lett. 529: 37-52.
7. Zhang, Z., et al. 2024. USF1 transcriptionally activates USP14 to drive atherosclerosis by promoting EndMT through NLRC5/Smad2/3 axis. Mol. Med. 30: 32.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.