

Product Datasheet

NOD2 Antibody (2D9) - BSA Free NB100-524

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-524

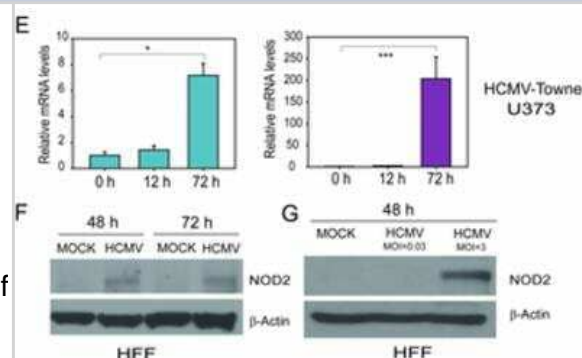
NOD2 Antibody (2D9) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2D9
Preservative	0.05% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	110 kDa
Product Description	
Host	Mouse
Gene ID	64127
Gene Symbol	NOD2
Species	Human, Mouse
Immunogen	Recombinant human NOD2 protein corresponding to residues 28-301. [UniProt# Q9HC29]
Product Application Details	
Applications	Western Blot, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:100-1:2000, Flow Cytometry reported in scientific literature (PMID 28241127), Immunohistochemistry 1:10-1:500, Immunocytochemistry/Immunofluorescence 1:50-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen, Flow (Intracellular)
Application Notes	In WB, this antibody has been tested with NOD2 transfected 293T lysates and HT29 human colorectal adenocarcinoma lysates (endogenous detection has some background) where a band is seen at ~110 kDa. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

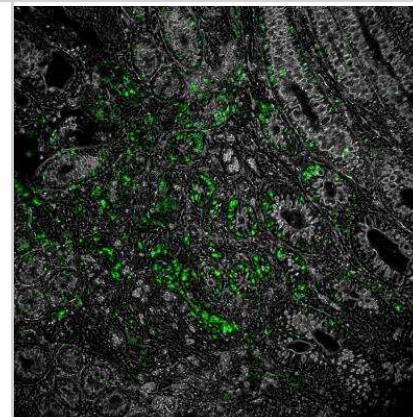


Images

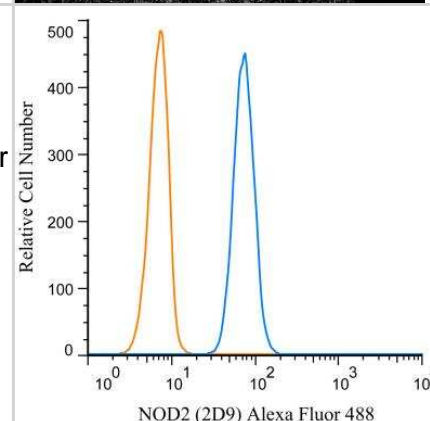
Western Blot: NOD2 Antibody (2D9) [NB100-524] - HCMV infection induces NOD2 mRNA and protein in HFFs and U373 cells. E. U373 glioma cells were infected with HCMV Towne strain and levels of NOD1, NOD2 and GAPDH mRNAs were measured by qRT-PCR at indicated time points. F. HFFs were infected with HCMV (Towne) at MOI of 1 PFU/cell and levels of NOD2 protein and B-actin were determined 48 and 72 hpi. G. HFFs were infected with HCMV (Towne) strain at MOI of 0.03 or 3 PFU/cell and levels of NOD2 protein and B-actin were determined at 48 hpi. Quantitative data represent mean values (+/-SD) of triplicate determinations from three independent experiments (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, one-way ANOVA test). Image collected and cropped by CiteAb from the following publication ([//doi.org/10.1371/journal.pone.0092704.g001](https://doi.org/10.1371/journal.pone.0092704.g001)) licensed under a CC-BY license.



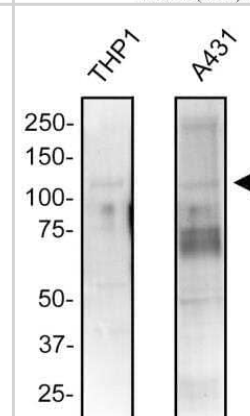
Immunohistochemistry-Frozen: NOD2 Antibody (2D9) [NB100-524] - Overlay of NOD2-DyLight 488 (green) with phase contrast of murine colon. Image from verified customer review.



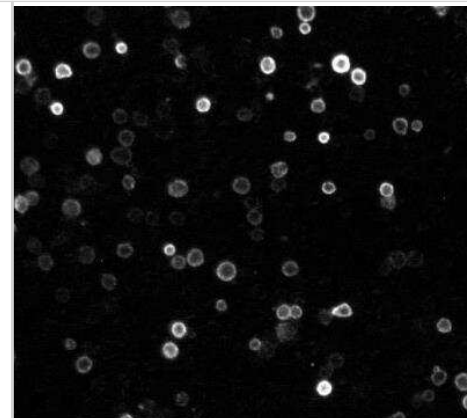
Flow (Intracellular): NOD2 Antibody (2D9) [NB100-524] - An intracellular stain was performed on THP-1 cells with NOD2 (2D9) antibody NB100-524AF488 (blue) and a matched isotype control NBP2-27287AF488 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 μ g/mL for 30 minutes.



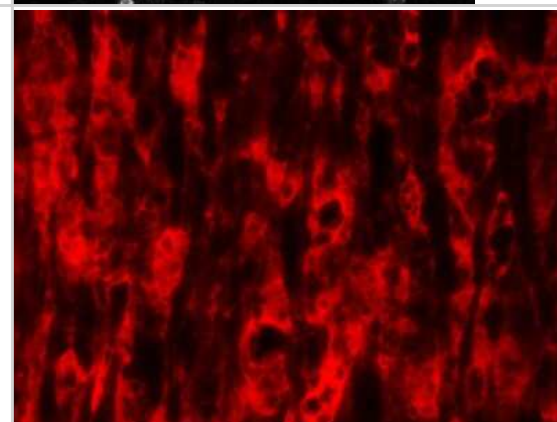
Western Blot: NOD2 Antibody (2D9) - BSA Free [NB100-524]



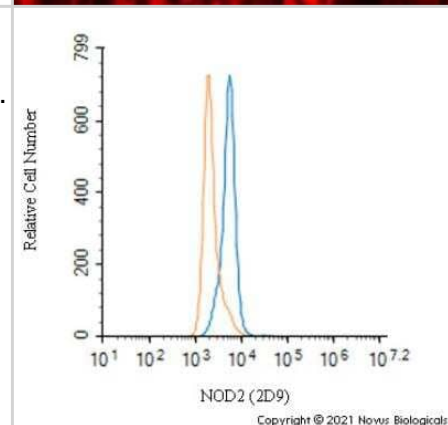
Immunocytochemistry/Immunofluorescence: NOD2 Antibody (2D9) [NB100-524] - NOD2 was detected in human monocytes using NOD2 antibody (2D9) [DyLight 488 (NB100-524G)]- with a concentration of 1:500 in PBS for 2 hours. Image from verified customer review.



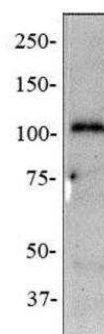
Immunohistochemistry: NOD2 Antibody (2D9) [NB100-524] - Analysis of PFA fixed mouse sciatic nerve section using anti-NOD2 antibody. Image from verified customer review.



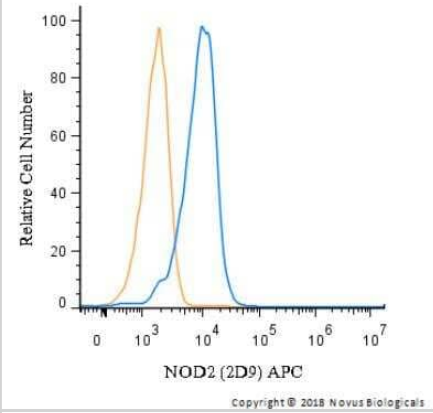
Flow Cytometry: NOD2 Antibody (2D9) [NB100-524] - An intracellular stain was performed on THP-1 cells with NOD2 Antibody (2D9) NB100-524 (blue) and a matched mouse IgG1 isotype control (orange) MAB002. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).



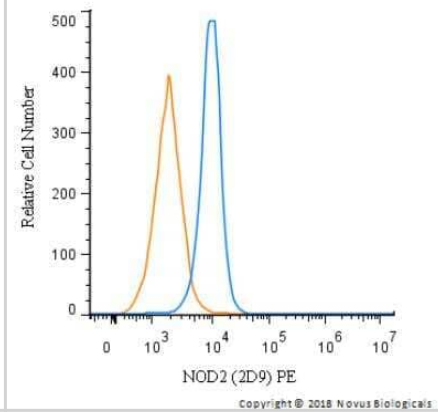
Western Blot: NOD2 Antibody (2D9) [NB100-524] - Whole cell protein from THP-1 cells was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2 ug/ml anti-NOD2 in 1% milk, and detected with an anti-mouse HRP secondary antibody using chemiluminescence.



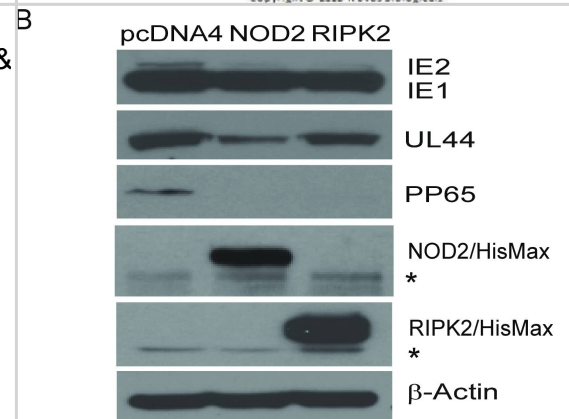
Flow Cytometry: NOD2 Antibody (2D9) [NB100-524] - An intracellular stain was performed on Jurkat cells with NOD2 (2D9) antibody NB100-524APC (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 μ g/mL for 30 minutes.



Flow Cytometry: NOD2 Antibody (2D9) [NB100-524] - An intracellular stain was performed on Jurkat cells with NOD2 (2D9) antibody NB100-524PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 μ g/mL for 30 minutes. Both antibodies were conjugated to phycoerythrin.



Western Blot: NOD2 Antibody (2D9) - BSA Free [NB100-524] - Overexpression of NOD2 restricts HCMV replication & induces antiviral & pro-inflammatory cytokines. B. Cell lysates from 4A used to determine protein expression of HCMV-immediate early (IE1/IE2), early (UL44), & late (pp65) genes. Levels of NOD2 & RIPK2 proteins measured to confirm NOD2 overexpression; β -actin served as loading control. WB data representative of 3 independent experiments. Asterisks (*) denote endogenous NOD2 & RIPK2 proteins. Image collected & cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0092704>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Hardman CS, Chen YL, Salimi M et al. IL-6 effector function of group 2 innate lymphoid cells (ILC2) is NOD2 dependent *Science Immunology* 2021-05-28 [PMID: 34021026]

Thakker P, Ariana A, Hajjar S et al. XIAP promotes the expansion and limits the contraction of CD8 T cell response through cell extrinsic and intrinsic mechanisms respectively *PLoS pathogens* 2023-06-22 [PMID: 37347786] (WB, Mouse)

Li X, Liu S, Jin L et al. NOD2 inhibits the proliferation of esophageal adenocarcinoma cells through autophagy *Journal of cancer research and clinical oncology* 2022-10-31 [PMID: 36316517] (WB, Human)

Tikka C, Manthari R, Niu R, et al. Dendritic cell CX3CR1 and macrophages F4/80 play a central role in between gut micro biome and inflammation in Arsenic induced mice *bioRxiv* 2021-01-26 (IF/IHC, Mouse)

Mai E, Percopo CM, Limkar AR et al Respiratory Epithelial Cells Respond to *Lactobacillus plantarum* but Provide No Cross-Protection against Virus-Induced Inflammation *Viruses* 2020-12-30 [PMID: 33374950] (FLOW, Mouse)

Details:

Citation using the Azide Free version of this antibody.

Huaman M, Qualls J, Jose S et al. *Mycobacterium bovis* Bacille-Calmette-Guérin Infection Aggravates Atherosclerosis *Frontiers in Immunology* 2020-12-18 [PMID: 33391278] (FLOW, Mouse)

Zhang L, Zhang B, Wei M et Al. TRIM22 inhibits endometrial cancer progression through the NOD2/NF kappa B signaling pathway and confers a favorable prognosis *Int J Oncol* 2020-03-04 [PMID: 32319602] (ICC/IF, WB, IF/IHC, IHC-P, Human)

Tikka C, Manthari R, Ommati M, et al. Immune disruption occurs through altered gut microbiome and NOD2 in arsenic induced mice: Correlation with colon cancer markers *Chemosphere* 2020-01-01 [PMID: 31927375] (ICC/IF, IF/IHC, Mouse)

Valdez-Miramontes CE, Trejo Martinez LA, Torres-Juarez F et al. Nicotine modulates molecules of the innate immune response in epithelial cells and macrophages during infection with *M. tuberculosis* *Clin Exp Immunol.* 2019-11-03 [PMID: 31631328]

Details:

Citation used the Alexa Fluor 647 format of this antibody.

Lipinski S, Petersen BS, Barann M et al. Missense variants in NOX1 and p22phox in a case of very-early-onset inflammatory bowel disease are functionally linked to NOD2 *Cold Spring Harb Mol Case Stud.* 2017-11-07 [PMID: 30709874] (WB, IP, Human)

Mey L, Jung M, Roos F et al. NOD1 and NOD2 of the innate immune system is differently expressed in human clear cell renal cell carcinoma, corresponding healthy renal tissue, its vasculature and primary isolated renal tubular epithelial cells *J. Cancer Res. Clin. Oncol.* 2019-03-22 [PMID: 30903318] (WB, FLOW, Human)

Singh K, Han K, Tilve S et al. Parkin targets NOD2 to regulate astrocyte endoplasmic reticulum stress and inflammation. *Glia.* 2018-11-01 [PMID: 30378174] (IP, Mouse)

More publications at <http://www.novusbio.com/NB100-524>



Procedures

Western Blot protocol for NOD2 Antibody (NB100-524)

Western Blot Protocol

1. Perform SDS-PAGE (3-8%) on samples to be analyzed, loading 20ug (transfected lysates) or 50ug (endogenous) of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk in TBS + 0.5% BSA for 1 hour.
6. Dilute the mouse anti-NOD2 primary antibody (NB 100-524) in blocking buffer and incubate 2 hours at room temperature.
7. Wash the membrane in water for 5 minutes and apply the diluted mouse-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.
8. Wash the blot in TBS containing 0.05-0.1% Tween-20 for 10-20 minutes.
9. Wash the blot in type I water for an additional 10-20 minutes (this step can be repeated as required to reduce background).
10. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Amersham's ECL is the standard reagent used at Novus Biologicals).

Note: Tween-20 can be added to the blocking buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.





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Products Related to NB100-524

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)
NB100-524G	NOD2 Antibody (2D9) [DyLight 488]

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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