Product Datasheet

IL-1 beta/IL-1F2 Antibody - Azide and BSA Free
NB600-633

Unit Size: 0.1 mg

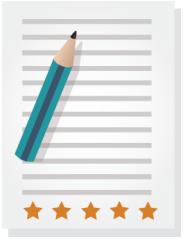
Store at -20C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.

www.novusbio.com technical@novusbio.com

Reviews: 4 Publications: 115

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB600-633

Updated 2/21/2025 v.20.1



NB600-633

IL-1 beta/IL-1F2 Antibody - Azide and BSA Free

Product Information

Unit Size	0.1 mg
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -20C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	No Preservative
Isotype	IgG
Purity	Ion exchange chromatography
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Product Description

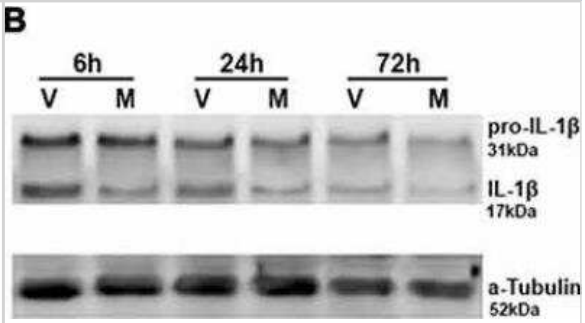
Description	This is an IgG preparation of whole rabbit serum purified by DEAE fractionation. Store vial at -20C prior to opening. Aliquot contents and freeze at -20C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4C as an undiluted liquid. Dilute only prior to immediate use.
Host	Rabbit
Gene ID	3553
Gene Symbol	IL1B
Species	Human, Mouse, Rat, Porcine, Canine, Monkey, Golden Syrian Hamster
Reactivity Notes	In general, this antibody also detects primate IL-1 beta/IL-1F2 in the same formats using similar dilutions. Use in Mouse reported in scientific literature (PMID: 33731931).
Specificity/Sensitivity	This antibody is primarily directed against mature, 17,000 MW human IL-1 beta/IL-1F2and is useful in determining its presence in various assays. In general, this antibody also detects primate IL-1 beta/IL-1F2in the same formats using similar dilutions. The antiserum does not recognize human IL-1alpha. In ELISA formats and other immunoreactive assays, this antibody will recognize 10% of the non-denatured (native) precursor 31,000 MW IL-1 beta/IL-1F2containing samples but will primarily detect all of the 17,000 MW mature molecule. However, in immunoblot analysis of natural cell products or human body fluids, the usual procedure of hearing the sample in SDS with or without reducing agents will facilitate denaturing of the 31,000 MW IL- 1beta precursor molecule. Denatured 31,000 precursor IL-1 beta/IL-1F2will be recognized by this antibody but often migrates as a 35,000 MW band. This is due to the unfolding of the denatured precursor IL-1 beta/IL-1F2exposing epitopes not exposed in the natural state. In immunoblots, depending on the number of cells, the antibody detects the 17,000 MW band in supernatants as well as a 35,000 MW band representing the 31,000 MW IL-1 beta/IL-1F2precursor in lysates.
Immunogen	This IL-1 beta/IL-1F2 Antibody was prepared by repeated immunizations with recombinant human IL-1 beta/IL-1F2 produced in E.coli. The MW of the recombinant 153 aa IL-1 beta/IL-1F2 was 17 kDa with the N-terminal amino acid at position alanine 117. This cleavage site is generated by the IL-1 beta/IL-1F2 converting enzyme (ICE, capase-1). (Uniprot: P01584)

Product Application Details

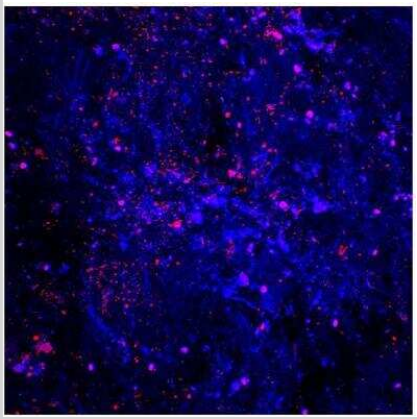
Applications	Western Blot, Dot Blot, ELISA, Electron Microscopy, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Immunohistochemistry Whole-Mount
Recommended Dilutions	Western Blot 1:1000, Flow Cytometry, ELISA 1:500-1:2000, Immunohistochemistry 1:100-1:200, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 1:400-1:800, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen, Dot Blot, Electron Microscopy 1:10-1:500, Immunohistochemistry Whole-Mount
Application Notes	This product has been tested for use in ELISA, immunohistochemistry, immunoblotting. This antibody is suitable for neutralizations, radioimmunoassays, flow cytometry, and immunoprecipitation. It recognizes the 17,000 MW mature IL-1beta. For immunoblots, typically, IL-1beta is detected from supernatants or lysates of 2 x 10E6 endotoxin-stimulated peripheral blood mononuclear cells (PBMC). PBMC are stimulated for 24 hours with 1% (v/v) serum plus 10 ng/mL E.coli LPS. For immunoprecipitation pre-clearing the preparation with a non-specific Rabbit IgG to reduce background is suggested. For immunohistochemistry either paraffin fixation or cryofixation can be used for sample preparation to stain intracellular IL-1beta. For ELISA use HRP Conjugated Anti-Rabbit IgG [H&L] (Goat) (611-1302) for detection. In ELISA formats this antibody is best used as the second antibody in combination with a monoclonal antibody as a capture antibody. This antibody is also useful for neutralization of human and primate IL-1beta activity in bioassays. It does not neutralize the biological activity IL-1alpha. It does not neutralize the biological activity of murine, rat or rabbit IL-1beta. For neutralization, it is recommended to incubate the sample with a dilution of the antibody for at least 4 hours before being tested. A control of similarly diluted normal rabbit IgG is recommended. This antibody can be used for FACS analysis. Caution should be exhibited as the F(c) domain of the rabbit IgG molecule may interact with cells non-specifically. Use in Immunohistochemistry-Frozen reported in scientific literature (PMID: 22898394). Use in Immunohistochemistry Whole-Mount reported in scientific literature (PMID:31399621).

Images

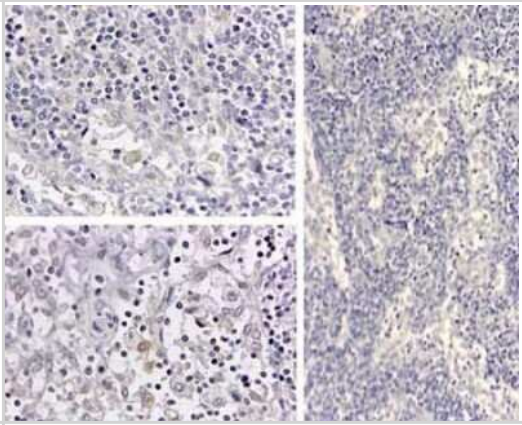
Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - Methylene blue (M) inhibits NLRP3 inflammasome formation in post-spinal cord injury (SCI) microglia compared to sham (V). Expression of pro-IL-1B and mature IL-1B in microglia sorted from post-SCI spinal cords. Representative Western blot images are shown in (B). Image collected and cropped by CiteAb from the following publication (https://journal.frontiersin.org/article/10.3389/fncel.2017.00391/full) licensed under a CC-BY license.



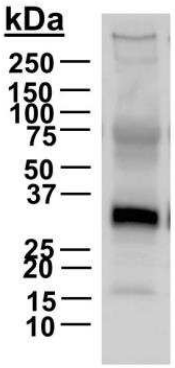
Immunocytochemistry/Immunofluorescence: IL-1 beta/IL-1F2 Antibody [NB600-633] - Trabecular Meshwork (TM) region of pig eyes were stained with IL-1 beta antibody (red). Image from verified customer review.



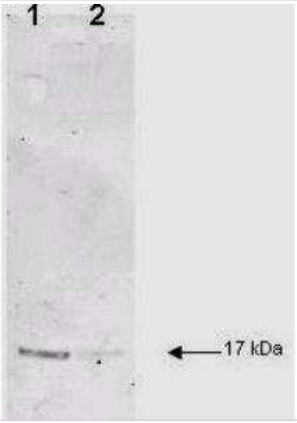
Immunohistochemistry: IL-1 beta/IL-1F2 Antibody [NB600-633] - Analysis of: Human IL1beta antibody Secondary antibody: Peroxidase goat anti-rabbit at 1:10,000 for 45 min at RT Localization: cytoplasm Staining: Close up of medullary lymph node: positive staining in the cytoplasm of circulating macrophages. Neg Ctr (far right) normal rabbit IgG with pH 6.2 40X

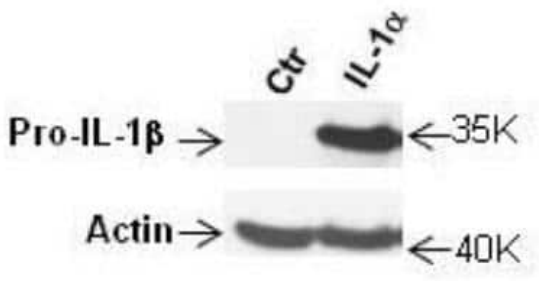
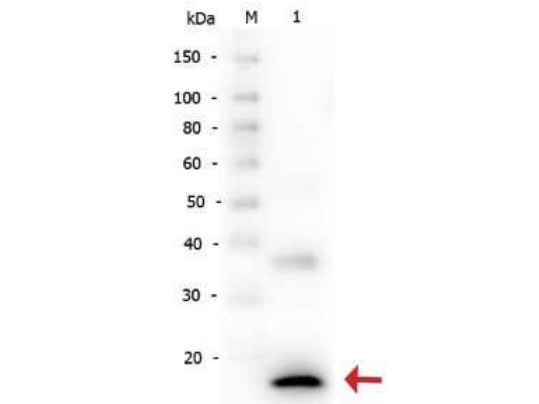
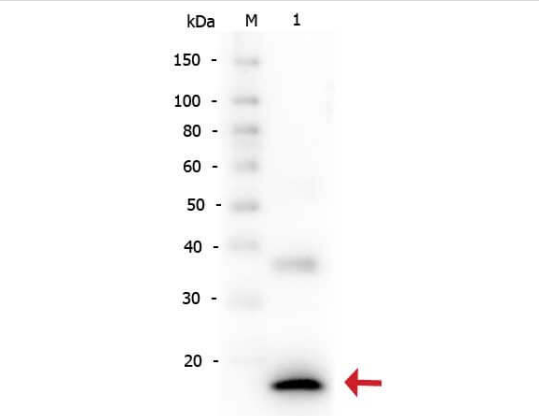


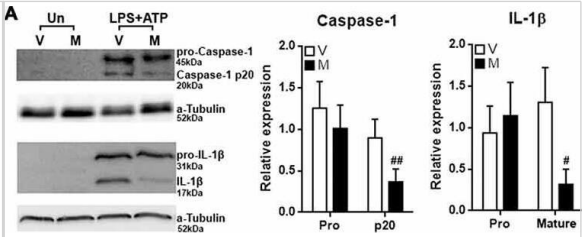
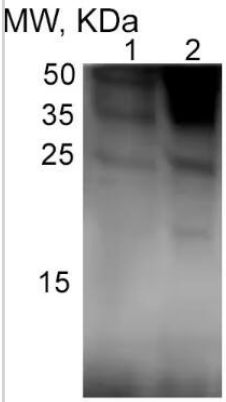
Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - Analysis of IL-1 beta in Rhesus fetal membrane using anti-IL-1 beta antibody. Image from verified customer review.



Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - Antibody was used at a 1:200 dilution incubated 1h at room temperature to detect dog IL-1b by Western blot. Lane 1 and 2 were loaded with 2.5 ug and 500 ng of dog IL-1b respectively. The molecular weight of the detected band is estimated by comparison to molecular weight markers (not shown). Detection occurred using a 1:3,000 dilution of IRDye (TM) 800 conjugated Donkey anti-Rabbit IgG for 1h at room temperature.



Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - pro-IL-1beta in glioblastoma cells. Image from verified customer review.	
Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - Lane 1: Human IL-1Beta. Load: 5 ng per lane. Primary antibody: Human IL-1Beta antibody at 1:2,000 for overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting for 30 min at RT. Predicted/Observed size: 17 kDa, 17 kDa for Human IL-1Beta. Other band(s): Unspecific band at 35 kDa.	
Western Blot of Rabbit anti-Human IL-1beta antibody. Lane 1: Human IL-1beta. Load: 5 ng per lane. Primary antibody: Human IL-1beta antibody at 1:2,000 for overnight at 4C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting () for 30 min at RT. Predicted/Observed size: 17 kDa, 17 kDa for Human IL-1beta. Other band(s): Unspecific band at ~35 kDa.	

Western Blot: IL-1 beta/IL-1F2 Antibody [NB600-633] - Methylene blue inhibits inflammasome formation in cultured microglia. (A) Expression of Pro-Caspase-1, Caspase-1 p20, pro-IL-1β & mature IL-1β in microglia with or without stimulation in the presence or absence of methylene blue. Left: representative Western blot images. Right: statistics. N = 5 per group. The (B) expression of NLRP3, NLRC4 & Aim2 in microglia. Left: representative Western blot images. Right: statistics. N = 4 per group. (C) Co-immunoprecipitation assay showing the binding of ASC to NLRP3 or NLRC4. Left: representative Western blot images. Right: statistics. Un: no stimulation. LPS+ATP: stimulation with LPS followed by ATP treatment. V: vehicle; M: 500 nM methylene blue. IP: immunoprecipitation with the antibody against indicated protein. IB: detection of indicated protein. To analyze the relative expression of target proteins, the band intensities of target proteins were normalized to corresponding band intensities of α-Tubulin, followed by calculating the expression in other groups relative to “Un (V)” group. N = 4 per group. *p < 0.05; **p < 0.01; ***p < 0.001 in comparison with unstimulated cells of the vehicle group. #p < 0.05; ##p < 0.01 in comparison with stimulated cells of the vehicle group. Image collected & cropped by CiteAb from the following publication (http://journal.frontiersin.org/article/10.3389/fncel.2017.00391/full), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: Rabbit Polyclonal IL-1 beta/IL-1F2 Antibody [NB600-633] - IL-1 beta/IL-1F2 Western blot of liver homogenate from control (1) and alcohol-fed mice (2). Image from a verified customer review.	

Publications

Haferland I, Wallenwein CM, Ickelsheimer T, Diehl S et Al. Mechanism of anti-inflammatory effects of rifampicin in an ex vivo culture system of hidradenitis suppurativa Exp Dermatol 2022-01-20 [PMID: 35048417]

Ketelauri P, Scharov K, von Gall C et Al. Acute Circadian Disruption Due to Constant Light Promotes Caspase 1 Activation in the Mouse Hippocampus Cells 2023-07-12 [PMID: 37508501]

Moon J, Cho KH, Jhun J et Al. Small heterodimer partner-interacting leucine zipper protein suppresses pain and cartilage destruction in an osteoarthritis model by modulating the AMPK/STAT3 signaling pathway Arthritis Res Ther 2024-11-13 [PMID: 39533324]

Kelly, SB;Dean, JM;Zahra, VA;Dudink, I;Thiel, A;Polglase, GR;Miller, SL;Hooper, SB;Bennet, L;Gunn, AJ;Galinsky, R; Progressive inflammation reduces high-frequency EEG activity and cortical dendritic arborisation in late gestation fetal sheep Journal of neuroinflammation 2023-05-24 [PMID: 37226206]

Titiz, M;Landini, L;Souza Monteiro de Araujo, D;Marini, M;Seravalli, V;Chieca, M;Pensieri, P;Montini, M;De Siena, G;Pasquini, B;Vannuccini, S;Iannone, LF;Cunha, TM;Brancolini, G;Bellantoni, E;Scuffi, I;Mastricci, A;Tesi, M;Di Tommaso, M;Petraglia, F;Geppetti, P;Nassini, R;De Logu, F; Schwann cell C5aR1 co-opts inflammasome NLRP1 to sustain pain in a mouse model of endometriosis Nature communications 2024-11-25 [PMID: 39587068]

Liu Y, Zhao C, Sander-Thömmes T et Al. Beta oscillation is an indicator for two patterns of sensorimotor synchronization Psych J 2023-10-31 [PMID: 37905907]

Park J, Na YC, Lee J et Al. Role of P(2)?×?(7) receptor during focused ultrasound induced blood brain barrier modulation Sci Rep 2025-01-06 [PMID: 39762398]

Dou H, Kotini A, Liu W et Al. Oxidized Phospholipids Promote NETosis and Arterial Thrombosis in LNK(SH2B3) Deficiency Circulation 2021-11-30 [PMID: 34846914]

Jeong HY, Park JS, Choi JW et Al. GRIM-19-mediated induction of mitochondrial STAT3 alleviates systemic sclerosis by inhibiting fibrosis and Th2/Th17 cells Exp Mol Med 2024-12-06 [PMID: 39643607]

C Shen, Z Luo, S Ma, C Yu, Q Gao, M Zhang, H Zhang, J Zhang, W Xu, J Yao, J Xu Microbe-Derived Antioxidants Reduce Lipopolysaccharide-Induced Inflammatory Responses by Activating the Nrf2 Pathway to Inhibit the ROS/NLRP3/IL-1beta Signaling Pathway International Journal of Molecular Sciences, 2022-10-18;23(20):. 2022-10-18 [PMID: 36293333]

Jeong HY, Park JS, Woo JS et Al. SARS-CoV-2 spike protein accelerates systemic sclerosis by increasing inflammatory cytokines, Th17 cells, and fibrosis J Inflamm (Lond) 2023-12-21 [PMID: 38129904]

Kim MH, Lim H, Kim OH et al. CD36 deficiency protects lipopolysaccharide-induced sepsis via inhibiting CerS6-mediated endoplasmic reticulum stress. International immunopharmacology 2024-10-25 [PMID: 39461238]

More publications at http://www.novusbio.com/NB600-633

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NB600-633

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP2-35895-10ug	Recombinant Human IL-1 beta/IL-1F2 Protein

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB600-633

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications