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IL1B Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8531C

Specification

IL1B Antibody (Center) - Product Information

Application	**IHC-P, WB, FC,E**
Primary Accession	P01584
Other Accession	P14628, P79182
Reactivity	**Human, Mouse**
Predicted	**Monkey, Rabbit**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**148-174**

IL1B Antibody (Center) - Additional Information

Gene ID 3553

Other Names
Interleukin-1 beta, IL-1 beta, Catabolin, IL1B, IL1F2

Target/Specificity
This IL1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 148-174 amino acids of human IL1B.

Dilution
IHC-P~~1:10~50
WB~~1:2000
FC~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
IL1B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

IL1B Antibody (Center) - Protein Information

Name IL1B (HGNC:5992)

Synonyms IL1F2

Function Potent pro-inflammatory cytokine (PubMed:10653850, PubMed:12794819, PubMed:28331908, PubMed:3920526). Initially discovered as the major endogenous pyrogen, induces prostaglandin synthesis, neutrophil influx and activation, T-cell activation and cytokine production, B-cell activation and antibody production, and fibroblast proliferation and collagen production (PubMed:3920526). Promotes Th17 differentiation of T-cells. Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T-helper 1 (Th1) cells (PubMed:10653850). Plays a role in angiogenesis by inducing VEGF production synergistically with TNF and IL6 (PubMed:12794819). Involved in transduction of inflammation downstream of pyroptosis: its mature form is specifically released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:33377178, PubMed:33883744). Acts as a sensor of S.pyogenes infection in skin: cleaved and activated by pyogenes SpeB protease, leading to an inflammatory response that prevents bacterial growth during invasive skin infection (PubMed:28331908).

Cellular Location
Cytoplasm, cytosol. Secreted. Lysosome Secreted, extracellular exosome {ECO:0000250|UniProtKB:P10749} Note=The precursor is cytosolic (PubMed:15192144). In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted (PubMed:24201029, PubMed:33377178, PubMed:33883744). Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:33883744). In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation (PubMed:33883744). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10 (PubMed:32272059)

Tissue Location
Expressed in activated monocytes/macrophages (at protein level).

IL1B Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

IL1B Antibody (Center) - Images

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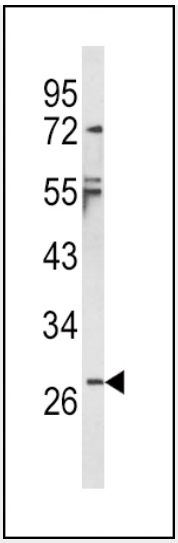
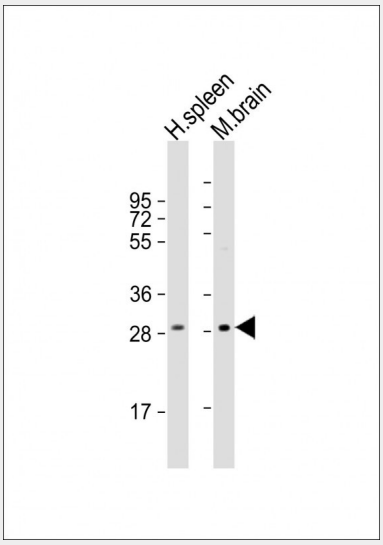


Western blot analysis of IL1B Antibody (Center) (Cat. #AP8531c) in NCI-H460 cell line lysates (35ug/lane). IL1B (arrow) was detected using the purified Pab.



All lanes : Anti-IL1B Antibody (Center) at 1:2000 dilution Lane 1: human spleen lysate Lane 2: mouse brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 31 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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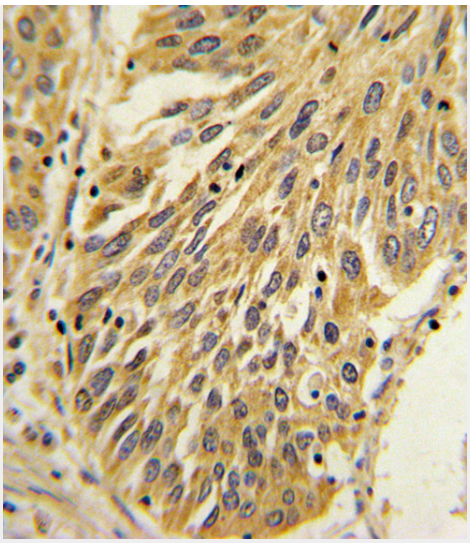
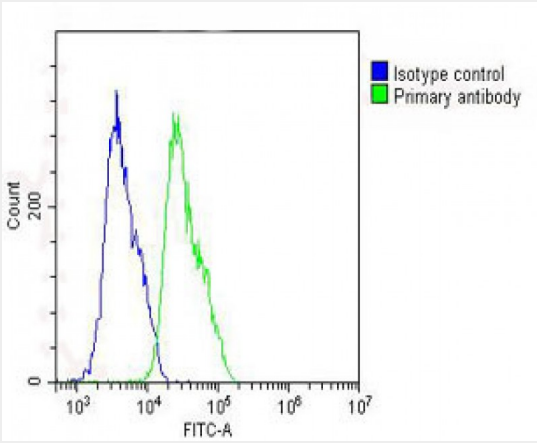


Formalin-fixed and paraffin-embedded human lung carcinoma with IL1B Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Overlay histogram showing MCF-7 cells stained with AP8531c (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP8531c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

IL1B Antibody (Center) - Background

IL1B is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity.

IL1B Antibody (Center) - References

Yu,J., et.al., Am. J. Gastroenterol. (2009)
Ito,A., et.al., J. Biol. Chem. 271 (25), 14657-14660 (1996)

IL1B Antibody (Center) - Citations

- Expression and clinical value of NLRP1 and NLRC4 inflammasomes in prostate cancer
- Activation of NLRP3 inflammasome by cholesterol crystalsin alcohol consumption induces atherosclerotic lesions.
- Effects of Berberine on NLRP3 and IL-1β Expressions in Monocytic THP-1 Cells with Monosodium Urate Crystals-Induced Inflammation.
- NF-κB activation and cell death after intracerebral hemorrhage in patients.