

#### **IL1B Antibody**

Purified Mouse Monoclonal Antibody Catalog # AO1632a

# **Specification**

# **IL1B Antibody - Product Information**

Application WB, IHC, ICC, E

Primary Accession
Reactivity
Host
Clonality
Isotype
P01584
Human
Mouse
Mouse
IgG1

Calculated MW 31kDa KDa

**Description** 

The modification of proteins with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. This gene encodes a member of the E2 ubiquitin-conjugating enzyme family. Four alternatively spliced transcript variants encoding the same protein have been found for this gene.

#### **Immunogen**

Purified recombinant fragment of human IL1B expressed in E. Coli. <br/> <br/>

# **Formulation**

Ascitic fluid containing 0.03% sodium azide.

### **IL1B Antibody - Additional Information**

**Gene ID** 3553

# **Other Names**

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

#### **Dilution**

WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~1/10000

#### **Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

## **Precautions**

IL1B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

# **IL1B Antibody - Protein Information**



### Name IL1B (<u>HGNC:5992</u>)

### Synonyms IL1F2

#### **Function**

Potent pro-inflammatory cytokine (PubMed: <a href="http://www.uniprot.org/citations/10653850" target=" blank">10653850</a>, PubMed:<a href="http://www.uniprot.org/citations/12794819" target="\_blank">12794819</a>, PubMed:<a href="http://www.uniprot.org/citations/28331908" target="blank">28331908</a>, PubMed:<a href="http://www.uniprot.org/citations/3920526" target="blank">3920526</a>). 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:<a href="http://www.uniprot.org/citations/3920526" target=" blank">3920526</a>). Promotes Th17 differentiation of T-cells. Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T-helper 1 (Th1) cells (PubMed:<a href="http://www.uniprot.org/citations/10653850" target=" blank">10653850</a>). Plays a role in angiogenesis by inducing VEGF production synergistically with TNF and IL6 (PubMed:<a href="http://www.uniprot.org/citations/12794819" target=" blank">12794819</a>). 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:<a href="http://www.uniprot.org/citations/33377178" target=" blank">33377178</a>, PubMed:<a href="http://www.uniprot.org/citations/33883744" target="blank">33883744</a>). 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:<a href="http://www.uniprot.org/citations/28331908" target=" blank">28331908</a>).

#### **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**

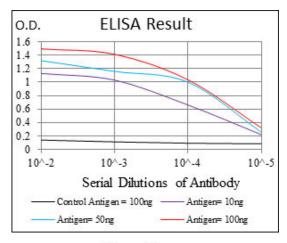
Expressed in activated monocytes/macrophages (at protein level).

## **IL1B Antibody - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture





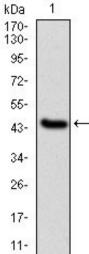


Figure 1: Western blot analysis using IL1B mAb against human IL1B (AA: 126-261) recombinant protein. (Expected MW is 41 kDa)

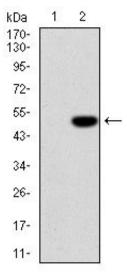


Figure 2: Western blot analysis using IL1B mAb against HEK293 (1) and IL1B-hlgGFc transfected HEK293 (2) cell lysate.



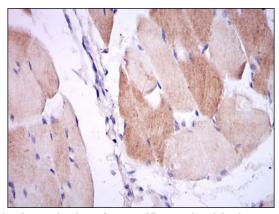


Figure 3: Immunohistochemical analysis of paraffin-embedded muscle tissues using IL1B mouse mAb with DAB staining.

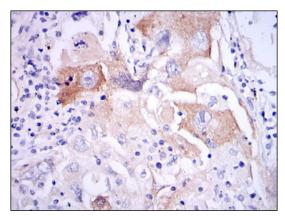


Figure 4: Immunohistochemical analysis of paraffin-embedded lung cancer tissues using IL1B mouse mAb with DAB staining.

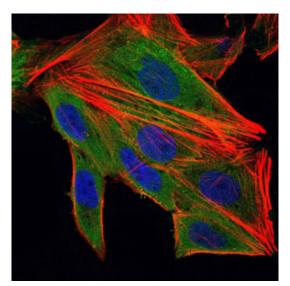


Figure 5: Immunofluorescence analysis of HepG2 cells using IL1B mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

# **IL1B Antibody - References**

1. Cell Signal. 2009 Dec;21(12):1935-44. 2. Nat Struct Mol Biol. 2009 Sep;16(9):945-52.



