10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IL1B Antibody (Center) (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2121a

Product Information

Application	WB, E
Primary Accession	P01584
Other Accession	P14628, P79182, NP_000567.1
Reactivity	Human
Predicted	Monkey, Rabbit
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	614CT4.3.1
Calculated MW	30748
Antigen Region	148-174

Additional Information

Gene ID	3553
Other Names	Interleukin-1 beta, IL-1 beta, Catabolin, IL1B, IL1F2
Target/Specificity	This IL1B antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 148-174 amino acids from the Central region of human IL1B.
Dilution	WB~~1:2000~4000 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
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) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

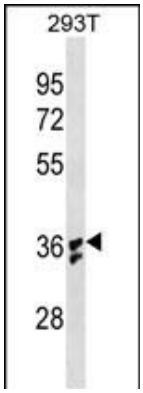
The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and 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. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2. [provided by RefSeq].

References

Lee, B., et al. J. Immunol. 185(10):5926-5934(2010)
Arana-Argaez, V.E., et al. J. Biol. Chem. 285(43):32824-32833(2010)
Zhang, Z., et al. J. Biol. Chem. 285(43):33092-33103(2010)
Wang, D., et al. Nat. Immunol. 11(10):905-911(2010)
Gein, O.N., et al. Patol Fiziol Eksp Ter 1, 10-13 (2010) :

Images

IL1B Antibody (Center)(Ascites)(Cat. #AM2121a). 293 cell lysates transiently transfected with the IL1B gene.



Citations

- Monocyte chemoattractant protein 1 released from macrophages induced by hepatitis C virus promotes monocytes migration.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.