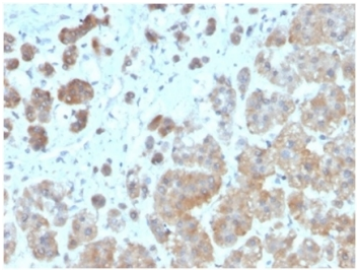
IL1 beta Antibody IL1B/3993 / Interleukin 1 Beta Antibody [clone IL1B/3993] (V9593)

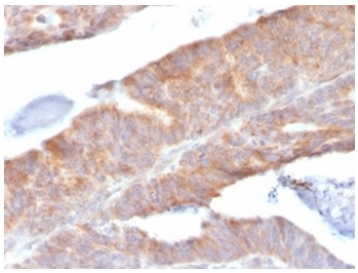
Catalog No.	Formulation	Size
V9593-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9593-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9593SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

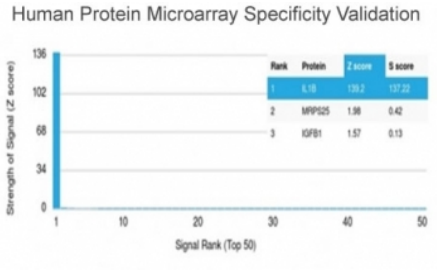
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	IL1B/3993
Purity	Protein A/G affinity
UniProt	P01584
Localization	Cytoplasm, Extracellular (secreted)
Applications	ELISA (order BSA-free format for coating) Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This IL1 beta Antibody IL1B/3993 / Interleukin 1 Beta Antibody is available for research use only.



IL1 beta Antibody IL1B/3993 in Human Adrenal Gland IHC. Immunohistochemistry of FFPE human adrenal gland using IL1 beta Antibody IL1B/3993 demonstrates moderate, predominantly cytoplasmic staining in groups of adrenal cells, with heterogeneous staining intensity across the tissue. HIER was performed by boiling sections in pH 9 10mM Tris containing 1mM EDTA for 20 min followed by cooling before testing. The staining demonstrates detection of IL1B by this Interleukin 1 Beta Antibody in human adrenal gland.



IL1 beta Antibody IL1B/3993 in Human Colon IHC. Immunohistochemistry of FFPE human colon using IL1 beta Antibody IL1B/3993 demonstrates widespread cytoplasmic staining within the colonic epithelium, with comparatively little nuclear staining. HIER was performed by boiling sections in pH 9 10mM Tris containing 1mM EDTA for 20 min followed by cooling before testing. This staining demonstrates detection of IL1B by the Interleukin 1 Beta Antibody in human colon tissue.



IL1 beta Antibody IL1B/3993 Protein Microarray Validated for IL1B Specificity. Protein microarray analysis using IL1 beta Antibody IL1B/3993 on a HuProt array containing more than 19,000 full-length human proteins identifies IL1B as the highest-ranked target, with a Z-score of 135.2 and S-score of 137.22. The Z-score measures signal strength in standard deviations above the mean array signal, while the S-score measures separation between the intended target and the next-ranked protein. The pronounced separation of IL1B from other array proteins provides strong specificity validation for this Interleukin 1 Beta Antibody.

Description

IL1 beta Antibody IL1B/3993 recognizes interleukin 1 beta (IL-1 beta), a proinflammatory cytokine encoded by the IL1B gene. IL1B is a member of the interleukin 1 cytokine family and plays an important role in innate immunity and the initiation and amplification of inflammatory responses. The protein is synthesized as an inactive precursor that undergoes proteolytic processing to generate the biologically active mature cytokine.

Production of mature IL-1 beta is closely associated with inflammasome signaling. Following appropriate cellular stimulation, inflammasome assembly promotes activation of caspase 1, which processes pro-IL-1 beta into its mature form. Mature IL-1 beta can then be released from cells and signal through interleukin 1 receptor type 1 (IL1R1), a receptor also utilized by IL-1 alpha. Receptor activation initiates signaling pathways involving MyD88, IRAK proteins, NF-kappaB, and MAPKs, leading to expression of additional inflammatory mediators.

IL1B is produced prominently by activated cells of the innate immune system, including monocytes and macrophages. Its signaling can influence leukocyte recruitment, vascular responses, fever, inflammatory pain, and communication between immune and nonimmune cells. Dysregulated IL-1 beta production and signaling have consequently been investigated in acute and chronic inflammation, autoinflammatory disorders, metabolic disease, tissue injury, and cancer-associated inflammation.

Clone IL1B/3993 is a mouse monoclonal antibody generated against a recombinant fragment of human IL1B. The antibody has also been evaluated on a HuProt protein microarray containing more than 19,000 full-length human proteins to assess target specificity. As an Interleukin 1 Beta Antibody, clone IL1B/3993 provides a defined monoclonal reagent for investigating this central mediator of inflammatory signaling. NSJ Bioreagents supplies IL1B/3993 for research use only.

An IL1 beta Antibody can be used to investigate IL1B expression and molecular mechanisms connecting inflammasome activation, cytokine signaling, innate immune responses, and inflammation.

Explore our Immunology Antibodies page for additional reagents targeting cytokines and proteins involved in innate immune and inflammatory signaling.

Application Notes

Optimal dilution of the IL1 beta Antibody IL1B/3993 / Interleukin 1 Beta Antibody should be determined by the researcher.

Immunogen

A recombinant protein fragment was used as the immunogen for the IL1 beta Antibody IL1B/3993.

Storage

Aliquot the IL1 beta Antibody IL1B/3993 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IL1B antibody, Interleukin 1 beta antibody, IL-1 beta antibody, IL1F2 antibody, Interleukin-1 family member 2 antibody, Catabolin antibody

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