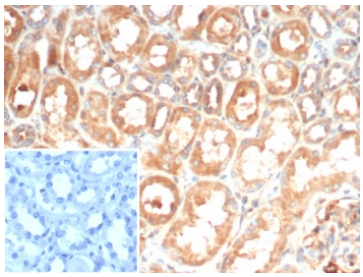
IL6 Antibody / Pro-Inflammatory Cytokine Marker [clone IL6/4643] (V5199)

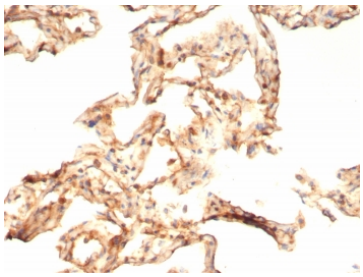
Catalog No.	Formulation	Size
V5199-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5199-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5199SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

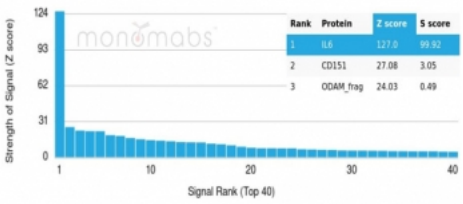
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	IL6/4643
Purity	Protein A/G affinity
UniProt	P05231
Localization	Cytoplasm, Extracellular (secreted)
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This IL6 Antibody / Pro-Inflammatory Cytokine Marker is available for research use only.



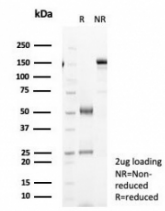
IL6 Antibody Human Kidney IHC. Immunohistochemical staining of FFPE human kidney tissue using Interleukin 6 Antibody / Pro-Inflammatory Cytokine Marker (clone IL6/4643) demonstrates prominent cytoplasmic and membranous HRP-DAB brown staining within renal tubular epithelial cells. The observed staining pattern is consistent with IL6 expression in kidney tissue, supporting the role of this pro-inflammatory cytokine in immune signaling, tissue stress responses, and regulation of local inflammatory microenvironments. Minimal background staining is observed in the PBS negative control inset, supporting staining specificity. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IL6 Antibody COVID-Positive Lung IHC. Immunohistochemical staining of FFPE human COVID-positive lung tissue using Interleukin 6 Antibody / Pro-Inflammatory Cytokine Marker (clone IL6/4643) demonstrates distinct brown staining within alveolar and interstitial cellular compartments. The observed staining pattern is consistent with increased IL6 expression in an inflamed pulmonary microenvironment and supports the established role of this cytokine in immune activation, inflammatory signaling, and cytokine-mediated tissue responses. Detection of IL6 within COVID-associated lung pathology highlights the utility of this antibody for investigating cytokine regulation, pulmonary inflammation, and immune-mediated disease mechanisms. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IL6 Antibody Protein Microarray Validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using Interleukin 6 Antibody / Pro-Inflammatory Cytokine Marker (clone IL6/4643) demonstrates exceptional target specificity for IL6. The intended target produced the highest signal on the array with a Z-score of 127.0, while the next highest ranked proteins, CD151 and ODAM, generated substantially lower signals. The resulting S-score of 99.92 greatly exceeds the accepted specificity threshold of 2.5, supporting highly selective recognition of IL6. These results demonstrate the foremost specificity of the IL6/4643 monoclonal antibody and support its use in studies of inflammatory signaling, cytokine biology, immune regulation, and inflammation-associated disease processes.



SDS-PAGE analysis of purified, BSA-free Interleukin 6 / IL6 antibody (clone IL6/4643) as confirmation of integrity and purity.

Description

IL6 antibody recognizes Interleukin 6 (IL6), a multifunctional cytokine that serves as a central mediator of inflammation, immune regulation, and host defense. Produced by activated macrophages, monocytes, dendritic cells, fibroblasts, endothelial cells, epithelial cells, adipocytes, and lymphocytes, IL6 coordinates communication between innate and adaptive immune systems during infection, tissue injury, and inflammatory stress. Through binding to the IL6 receptor complex and activation of JAK/STAT, MAPK, and PI3K signaling pathways, IL6 influences cellular responses that range from acute inflammatory activation to long-term tissue remodeling and immune adaptation.

IL6 plays an important physiologic role in promoting acute phase responses, regulating leukocyte recruitment, supporting B-cell maturation, and influencing differentiation of T helper cell populations. The cytokine stimulates hepatocytes to produce acute phase proteins and helps coordinate systemic responses to injury and infection. Because IL6 can be produced by numerous immune and non-immune cell types, it functions as a critical signaling molecule linking localized tissue damage to broader immune activation. Tight regulation of IL6 expression is therefore essential for maintaining normal inflammatory balance and preventing excessive immune-mediated tissue injury.

Dysregulated IL6 signaling has been implicated in a wide range of human diseases. Elevated IL6 expression is associated with chronic inflammatory disorders, autoimmune diseases, cardiovascular disease, fibrosis, metabolic dysfunction, and numerous infectious disease processes. Persistent IL6 production can contribute to cytokine amplification loops that sustain inflammation and promote pathologic tissue remodeling. Consequently, IL6 has become one of the most extensively studied cytokines in immunology and inflammation research, serving as both a biomarker of immune activation and a mechanistic target for understanding inflammatory disease progression.

In cancer biology, IL6 contributes to tumor-associated inflammation and communication between malignant cells and the surrounding microenvironment. Increased IL6 expression has been reported in multiple solid tumors and hematologic malignancies, where the cytokine may support cancer cell survival, angiogenesis, immune evasion, and metastatic progression. Researchers frequently evaluate IL6 expression to investigate inflammatory signaling networks within tumors and to better understand how cytokine-mediated pathways influence cancer development and therapeutic responses. These activities have established IL6 as an important biomarker for studies of both tumor biology and immune-oncology.

IL6 is also highly relevant in pulmonary, infectious disease, and cytokine storm research. Altered IL6 expression has been observed in inflamed tissues affected by viral and bacterial infections, as well as severe systemic inflammatory conditions. Because IL6 occupies a central position within cytokine signaling networks, measurement of its expression can provide valuable insight into the intensity and nature of immune responses occurring within diseased tissues. Evaluation of IL6 distribution by immunohistochemistry further allows researchers to identify cellular sources of cytokine production and characterize inflammatory microenvironments within clinical and experimental specimens.

IL6 antibody, clone IL6/4643, has been validated through immunohistochemistry and Protein Microarray specificity analysis. Protein Microarray Validated antibodies provide enhanced confidence in target specificity by demonstrating preferential binding to the intended antigen across thousands of proteins. Combined with tissue-based validation, this IL6 antibody is well suited for investigations of inflammatory signaling, immune regulation, cytokine biology, infectious disease mechanisms, tumor-associated inflammation, and chronic inflammatory disorders. Researchers utilize IL6 antibodies to characterize cytokine expression patterns, monitor immune activation, and explore pathways involved in inflammation-driven disease processes.

Explore additional markers involved in cytokine signaling, leukocyte activation, and host defense pathways within our Immunology Antibodies collection.

Application Notes

Optimal dilution of the IL6 Antibody / Pro-Inflammatory Cytokine Marker should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the Interleukin 6 / IL6 antibody.

Storage

Aliquot the Interleukin 6 / IL6 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Interleukin 6 Antibody, IL-6 Antibody, B-Cell Stimulatory Factor 2 Antibody, BSF2 Antibody, Hybridoma Growth Factor Antibody, Hepatocyte Stimulating Factor Antibody, Interferon Beta-2 Antibody

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