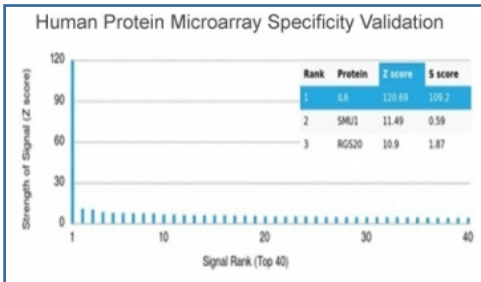
Interleukin-6 Antibody / IL6 Antibody [clone IL6/4647] (V4027)

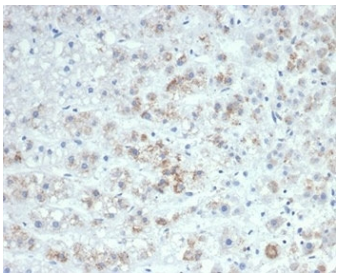
Catalog No.	Formulation	Size
V4027-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4027-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4027SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	IL6/4647
Purity	Protein A/G affinity
UniProt	P05231
Localization	Cytoplasm, extracellular
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Interleukin-6 Antibody / IL6 Antibody is available for research use only.



Interleukin-6 Protein Microarray Specificity Validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using Interleukin-6 Antibody / IL6 Antibody (clone IL6/4647) demonstrates exceptional target specificity for IL6. The intended target ranked first among all proteins evaluated, generating a Z-score of 116.69. The next highest ranked proteins, SMU1 and RGS20, produced substantially lower signals, resulting in an S-score of 105.30 for IL6. Because an S-score above 2.5 is generally considered indicative of target specificity, these results strongly support selective recognition of Interleukin 6 by the IL6/4647 monoclonal antibody. The large separation between IL6 and all other detected proteins demonstrates the foremost specificity of the IL6/4647 mAb and supports its application in studies of cytokine signaling, inflammatory responses, immune regulation, and disease-associated inflammatory pathways.



Interleukin-6 Antibody Human Adrenal Gland IHC. Immunohistochemical staining of FFPE human adrenal gland tissue using Interleukin-6 Antibody / IL6 Antibody (clone IL6/4647) demonstrates granular cytoplasmic HRP-DAB brown staining within scattered adrenal cortical cells. The observed staining pattern is consistent with expression of IL6, a multifunctional cytokine involved in inflammatory signaling, immune regulation, stress responses, and communication between endocrine and immune systems. Detection of IL6 within adrenal tissue supports the utility of this antibody for investigating cytokine-mediated signaling pathways and inflammatory mechanisms across endocrine and immune-related research applications. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

Interleukin-6 antibody recognizes Interleukin 6 (IL6), a secreted cytokine that plays a critical role in coordinating inflammatory responses, immune regulation, and host defense mechanisms. IL6 is produced by numerous cell types including macrophages, monocytes, dendritic cells, endothelial cells, fibroblasts, epithelial cells, adipocytes, and activated lymphocytes. Through engagement of the IL6 receptor complex and downstream signaling pathways, IL6 helps regulate communication between immune and non-immune tissues during infection, injury, and inflammatory stress. Its broad biologic activity has established IL6 as one of the most extensively studied cytokines in immunology research.

IL6 functions as a central mediator of acute phase responses and contributes to regulation of both innate and adaptive immunity. The cytokine promotes B-cell maturation, influences T-cell differentiation, stimulates production of acute phase proteins by hepatocytes, and helps coordinate leukocyte recruitment to sites of tissue injury. Because IL6 can act locally within tissues as well as systemically throughout the body, it serves as an important signaling molecule linking inflammatory stimuli to broader physiologic responses. Tight control of IL6 production is therefore essential for maintaining immune homeostasis and preventing excessive inflammation.

Abnormal IL6 expression has been implicated in numerous inflammatory and autoimmune disorders. Elevated IL6 levels have been reported in rheumatoid arthritis, inflammatory bowel disease, psoriasis, systemic inflammatory syndromes, cardiovascular disease, fibrosis, and metabolic disorders. Persistent activation of IL6 signaling pathways may contribute to chronic inflammation, immune dysregulation, and tissue remodeling. As a result, IL6 remains an important biomarker for studying inflammatory disease mechanisms and cytokine-mediated cellular responses.

Interleukin 6 is also widely investigated in oncology research due to its involvement in tumor-associated inflammation and microenvironmental signaling. Increased IL6 expression has been documented in many solid tumors and hematologic malignancies, where it may support cancer cell survival, angiogenesis, immune modulation, and metastatic progression. Researchers frequently evaluate IL6 expression to better understand interactions between tumor cells and immune cell populations, as well as the contribution of inflammatory signaling networks to disease progression and therapeutic response.

Beyond cancer and autoimmune disease research, IL6 is highly relevant to studies of infectious disease, pulmonary inflammation, tissue injury, and cytokine signaling biology. Alterations in IL6 expression have been associated with diverse inflammatory conditions affecting multiple organ systems. Evaluation of IL6 distribution and expression patterns can provide valuable insight into immune activation states, inflammatory microenvironments, and cellular responses to physiologic or pathologic stress. Consequently, IL6 antibodies are frequently utilized across a broad range of experimental models investigating inflammation-driven biological processes.

This Interleukin-6 antibody has been validated through Protein Microarray specificity analysis, providing additional confidence in target recognition and antibody selectivity. Protein Microarray Validated antibodies are screened against thousands of human proteins to confirm preferential binding to the intended target and reduce the likelihood of off-target interactions. This IL6 antibody is suitable for investigations of cytokine biology, inflammatory signaling, immune regulation, tumor-associated inflammation, infectious disease mechanisms, and chronic inflammatory disorders.

For additional validated antibodies targeting this important inflammatory cytokine, visit our IL6 Antibody / Pro-Inflammatory Cytokine Marker page featuring complementary reagents for studies of cytokine signaling, immune activation, and inflammation-associated disease processes.

Application Notes

Optimal dilution of the Interleukin-6 Antibody / IL6 Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-200 from the human IL-6 protein was used as the immunogen for the Interleukin-6 antibody.

Storage

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

Alternate Names

IL6 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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