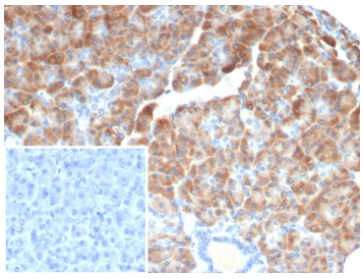
IL-6 Antibody IL6/4642 / Interferon Beta-2 Antibody [clone IL6/4642] (V5198)

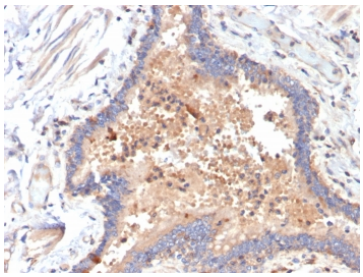
Catalog No.	Formulation	Size
V5198-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5198-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5198SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

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	IL6/4642
Purity	Protein A/G affinity
UniProt	P05231
Localization	Cytoplasm, Extracellular (secreted)
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This IL-6 Antibody IL6/4642 / Interferon Beta-2 Antibody is available for research use only.



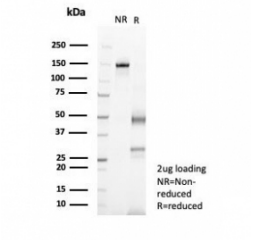
IL-6 Antibody IL6/4642 Staining in Human Pancreas IHC. Immunohistochemistry of FFPE human pancreas tissue using IL-6 Antibody clone IL6/4642 shows strong, widespread cytoplasmic brown staining throughout the pancreatic parenchyma. The PBS negative-control inset shows minimal background staining, providing a useful contrast with the positive tissue. HIER was performed by boiling sections in pH 9 10 mM Tris containing 1 mM EDTA for 20 min followed by cooling before testing. This staining demonstrates detection of IL-6, historically known as interferon beta-2, in human pancreas tissue.



IL-6 Antibody IL6/4642 Staining in COVID-Positive Human Lung IHC. Immunohistochemistry of FFPE COVID-positive human lung tissue using IL-6 Antibody clone IL6/4642 shows prominent brown staining concentrated within cellular regions of the inflamed pulmonary tissue, with heterogeneous staining intensity across the section. HIER was performed by boiling sections in pH 9 10 mM Tris containing 1 mM EDTA for 20 min followed by cooling before testing. The observed pattern demonstrates detection of IL-6/interferon beta-2 within the inflammatory cellular environment of COVID-positive human lung tissue.



IL-6 Antibody IL6/4642 Protein Microarray Validated. Protein microarray analysis of IL-6 Antibody clone IL6/4642 on a HuProt array containing more than 19,000 full-length human proteins shows IL6 as the dominant target signal with clear separation from the remaining proteins. The Z-score represents target signal strength in standard deviations above the array mean, while the S-score measures separation between the intended target and the next-ranked protein. The strong IL6 signal and substantial target separation support the specificity of this Interferon Beta-2 Antibody.



IL-6 Antibody IL6/4642 Purity and Integrity by SDS-PAGE. SDS-PAGE analysis of 2 ug of purified, BSA-free IL-6 Antibody clone IL6/4642 under non-reducing (NR) and reducing (R) conditions demonstrates the expected immunoglobulin migration pattern. The intact antibody migrates above 100 kDa under non-reducing conditions, while reduction produces prominent heavy and light chain bands at approximately 50 kDa and 25 kDa, respectively. The defined banding pattern confirms the integrity of the purified Interferon Beta-2 Antibody preparation.

Description

IL-6 Antibody IL6/4642 recognizes interleukin 6 (IL-6), a secreted cytokine encoded by the IL6 gene that participates in immune regulation, inflammation, hematopoiesis, and the acute-phase response. IL-6 was independently identified through several biological activities and was historically known by names including interferon beta-2, B cell stimulatory factor 2 (BSF-2), and hepatocyte-stimulating factor. These diverse early descriptions reflect the broad biological functions now attributed to IL-6.

IL-6 signaling begins when the cytokine binds IL6R (CD126), followed by association with the signal-transducing receptor component gp130 (IL6ST/CD130). Formation of this receptor complex activates intracellular pathways including JAK-STAT, particularly STAT3, as well as MAPK and PI3K-AKT signaling. IL-6 can signal through membrane-bound IL6R or through soluble IL6R in a process known as trans-signaling, allowing IL-6 responses to extend to cells that express gp130 but lack membrane-bound IL6R.

IL-6 influences numerous immune and physiological processes, including B-cell differentiation, T-cell responses, hematopoietic regulation, and hepatic production of acute-phase proteins. Production of IL-6 can increase rapidly in response to infection, tissue injury, and inflammatory stimuli. Persistent or dysregulated IL-6 signaling is consequently studied in chronic inflammatory and autoimmune conditions as well as cancer, where the cytokine can contribute to interactions among immune cells, stromal cells, and malignant cells.

Clone IL6/4642 is a mouse monoclonal antibody generated against recombinant human IL6 protein. 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 Interferon Beta-2 Antibody, clone IL6/4642 provides a defined reagent for investigating the cytokine historically identified as interferon beta-2 and its diverse roles in immune and inflammatory signaling. NSJ Bioreagents supplies IL6/4642 for research use only.

An IL-6 Antibody can be used to investigate IL6 expression and molecular mechanisms connecting cytokine signaling,

immune activation, acute-phase responses, and inflammatory disease.

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 IL-6 Antibody IL6/4642 / Interferon Beta-2 Antibody 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 IL-6 Antibody IL6/4642.

Storage

Aliquot the IL-6 Antibody IL6/4642 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IL6 antibody, IL-6 antibody, interleukin 6 antibody, interleukin-6 antibody, BSF-2 antibody, B cell stimulatory factor 2 antibody, B-cell stimulatory factor 2 antibody, interferon beta-2 antibody, IFNB2 antibody, hepatocyte-stimulating factor antibody, HSF antibody, hybridoma growth factor antibody, hybridoma-plasmacytoma growth factor antibody, B cell differentiation factor antibody, cytotoxic T cell differentiation factor antibody

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