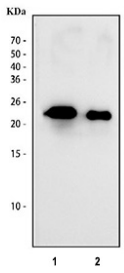
IL-6 Antibody / Interleukin 6 (R30787)

Catalog No.	Formulation	Size
R30787	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P05231
Applications	Western Blot : 0.5-1ug/ml
Limitations	This IL-6 antibody is available for research use only.



Western blot testing of IL-6 antibody and recombinant human protein: Lane 1: 5ng, Lane 2: 2.5ng.

Description

IL-6 antibody targets Interleukin 6, encoded by the IL6 gene. Interleukin 6 is a pleiotropic cytokine that plays a central role in immune regulation, inflammation, and tissue homeostasis. IL-6 is produced by a wide range of cell types, including macrophages, monocytes, T cells, B cells, fibroblasts, endothelial cells, and epithelial cells, in response to infection, tissue injury, or inflammatory stimuli. As a soluble mediator, Interleukin 6 functions in both local and systemic signaling contexts, linking innate immune activation to downstream adaptive immune responses.

Functionally, Interleukin 6 signals through a receptor complex composed of the IL-6 receptor alpha subunit and the signal-

transducing component gp130. This signaling can occur via classical signaling in cells expressing membrane-bound IL-6 receptor or through trans-signaling involving soluble IL-6 receptor, thereby expanding the range of IL-6-responsive cells. Activation of IL-6 signaling pathways leads to downstream engagement of JAK-STAT, MAPK, and PI3K signaling cascades, resulting in transcriptional programs that regulate cell survival, proliferation, and differentiation. An IL-6 antibody supports studies focused on cytokine signaling and inflammatory pathway activation.

IL6 expression is rapidly induced during acute inflammatory responses and is tightly controlled under normal physiological conditions. One of the hallmark functions of Interleukin 6 is its role in driving the hepatic acute-phase response, where it stimulates the production of proteins such as C-reactive protein and serum amyloid A. IL-6 also influences B cell maturation into antibody-producing plasma cells and contributes to T cell differentiation, including effects on Th17 cell development. Through these actions, IL-6 acts as a key coordinator of immune defense and inflammatory balance.

From a disease-relevance perspective, dysregulated IL-6 signaling has been implicated in a wide spectrum of pathological conditions. Elevated IL-6 levels are associated with chronic inflammatory diseases, autoimmune disorders, metabolic dysfunction, and cardiovascular disease. IL-6 has also been extensively studied in cancer biology, where it can promote tumor growth, survival, and immune evasion within the tumor microenvironment. In addition, excessive IL-6 signaling has been linked to systemic inflammatory states and cytokine-driven pathology, underscoring its importance in immune-mediated disease research.

At the molecular level, Interleukin 6 is synthesized as a protein of approximately 21 to 28 kDa, with apparent molecular weight variation reflecting glycosylation and processing. As a secreted cytokine, IL-6 lacks transmembrane domains and exerts its effects through receptor-mediated signaling at the cell surface. An IL-6 antibody supports research applications focused on inflammation, immune regulation, cytokine biology, and disease-associated signaling pathways, with NSJ Bioreagents providing reagents intended for research use.

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

The stated application concentrations are suggested starting points. Titration of the IL-6 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 195-212 (LRSFKEFLQSSLRALRQM) were used as the immunogen for this IL-6 antibody.

Storage

After reconstitution, the IL-6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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