

Anti-Human IL-6 Antibody [A6D2]

HA601050



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, ELISA
Molecular Wt:	Predicted band size: 24 kDa
Clone number:	A6D2

Description: Interleukin 6 (IL-6) is an interleukin that acts as both a pro-inflammatory cytokine and an anti-inflammatory myokine. In addition, osteoblasts secrete IL-6 to stimulate osteoclast formation. Smooth muscle cells in the tunica media of many blood vessels also produce IL-6 as a pro-inflammatory cytokine. IL-6's role as an anti-inflammatory myokine is mediated through its inhibitory effects on TNF-alpha and IL-1 and its activation of IL-1ra and IL-10. There is some early evidence that IL-6 can be used as an inflammatory marker for severe COVID-19 infection with poor prognosis, in the context of the wider coronavirus pandemic. IL-6 is secreted by macrophages in response to specific microbial molecules, referred to as pathogen-associated molecular patterns (PAMPs). These PAMPs bind to an important group of detection molecules of the innate immune system, called pattern recognition receptors (PRRs), including Toll-like receptors (TLRs). These are present on the cell surface and intracellular compartments and induce intracellular signaling cascades that give rise to inflammatory cytokine production. IL-6 is an important mediator of fever and of the acute phase response. IL-6 stimulates the inflammatory and auto-immune processes in many diseases such as multiple sclerosis, neuromyelitis optica spectrum disorder (NMOSD), diabetes, atherosclerosis, depression, Alzheimer's disease, systemic lupus erythematosus, multiple myeloma, prostate cancer, Behçet's disease, rheumatoid arthritis, and intracerebral hemorrhage.

Immunogen: Recombinant protein within human IL-6 aa 1-212/212.

Positive control: Recombinant human IL-6 protein.

Subcellular location: Secreted.

Database links: SwissProt: P05231 Human

Recommended Dilutions:

WB 1:500

ELISA 1:5,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Images

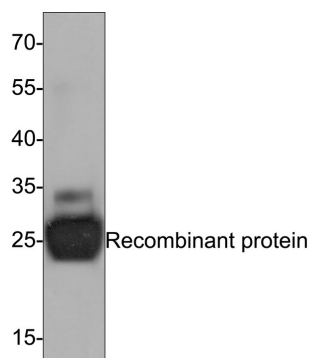


Fig1: Western blot analysis of Human IL-6 on recombinant protein with Mouse anti-Human IL-6 antibody (HA601050) at 1/500 dilution.

Lysates/proteins at 50 ng/Lane.

Exposure time: 30 seconds;

12% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601050) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

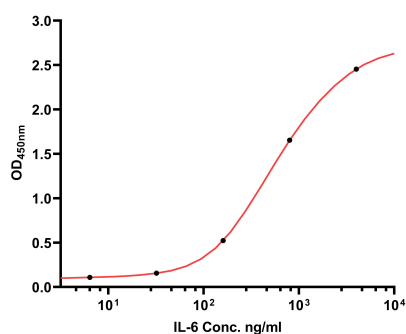


Fig2: Human IL-6 Antibody (HA601050) in indirect ELISA.

Indirect ELISA analysis of Human IL-6 was performed by coating wells of a 96-well plate with 50 μ l per well of Human IL-6 antigen diluted in carbonate/bicarbonate buffer, at a concentration of 1 μ g/mL overnight at 4°C. Wells of the plate were washed, blocked with StartingBlock blocking buffer, and incubated with 50 μ l per well of a mouse Human IL-6 monoclonal antibody starting at a concentration of 20 μ g/mL and serially diluting it to a concentration of 1.28 ng/mL for 2 hours at room temperature. The plate was washed and incubated with 50 μ l per well of an HRP-conjugated goat anti-mouse IgG secondary antibody at a dilution of 1:10,000 for one hour at room temperature. Detection was performed using an Ultra TMB Substrate for 5 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Ibrahim ML. et. al. Expression profiles and function of IL6 in polymorphonuclear myeloid-derived suppressor cells. Cancer Immunol Immunother. 2020 Nov
2. Galoian K. et. al. Analysis of IL6-protein complexes in chondrosarcoma. Biomed Rep. 2018 Jan

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