Anti-IL-2 Antibody [A8B9]

HA601016

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, ELISA
Molecular Wt:	Predicted band size: 18 kDa
Clone number:	A8B9

Description: Interleukin-2 (IL-2) is an interleukin, a type of cytokine signaling molecule in the immune system. It is a 15.5–16 kDa protein that regulates the activities of white blood cells (leukocytes, often lymphocytes) that are responsible for immunity. IL-2 has essential roles in key functions of the immune system, tolerance and immunity, primarily via its direct effects on T cells. In the thymus, where T cells mature, it prevents autoimmune diseases by promoting the differentiation of certain immature T cells into regulatory T cells, which suppress other T cells that are otherwise primed to attack normal healthy cells in the body. IL-2 enhances activation-induced cell death (AICD). IL-2 also promotes the differentiation of T cells into effector T cells and into memory T cells when the initial T cell is also stimulated by an antigen, thus helping the body fight off infections. Together with other polarizing cytokines, IL-2 stimulates naive CD4+ T cell differentiation into Th1 and Th2 lymphocytes while it impedes differentiation into Th17 and folicular Th lymphocytes. IL-2 increases the cell killing activity of both natural killer cells and cytotoxic T cells. Its expression and secretion is tightly regulated and functions as part of both transient positive and negative feedback loops in mounting and dampening immune responses. Through its role in the development of T cell immunologic memory, which depends upon the expansion of the number and function of antigen-selected T cell clones, it plays a key role in enduring cell-mediated immunity. While the causes of itchiness are poorly understood, some evidence indicates that IL-2 is involved in itchy psoriasis.

Immunogen:	Recombinant protein within human IL-2 aa 1-153/153.
Positive control:	IL-2 recombinant protein.
Subcellular location:	Secreted.
Database links:	SwissProt: P60568 Human
Recommended Dilutions:	
WB	1:500
ELISA	1:20,000
Storage Buffer:	PBS (pH7.4).
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein G affinity purified.

Images

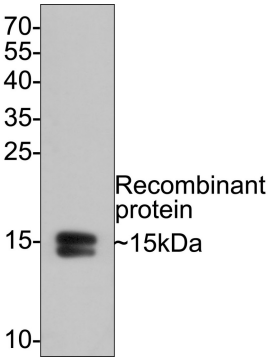

Fig1: Western blot analysis of IL-2 on IL-2 recombinant protein with Mouse anti-IL-2 antibody (HA601016) at 1/500 dilution.

Lysates/proteins at 50 ng/Lane.

Exposure time: 30 seconds;

15% 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 (HA601016) 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.

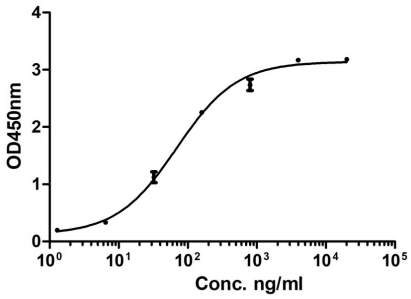

Fig2: IL-2 Antibody (HA601016) in indirect ELISA.

Indirect ELISA analysis of IL-2 was performed by coating wells of a 96-well plate with 50 µl per well of IL-2 antigen diluted in carbonate/bicarbonate buffer, at a concentration of 1 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with StartingBlock blocking buffer, and incubated with 50 µl per well of a mouse IL-2 monoclonal antibody starting at a concentration of 20 µg/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 µl 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.

Background References

1. Mizui M. Natural and modified IL-2 for the treatment of cancer and autoimmune diseases. Clin Immunol. 2019 Sep
2. Abbas AK. et. al. Revisiting IL-2: Biology and therapeutic prospects. Sci Immunol. 2018 Jul