

# IL6 / IL-6 Neutralizing Antibody



Sino Biological  
Biological Solution Specialist

Catalog Number: 10395-mhK23

General Information	
Immunogen:	Recombinant Human IL6 / IL-6 protein (Catalog#10395-HNAE)
Clone ID:	mhK23
Ig Type:	mouse (variable region) / human (kappa / IgG1 constant) chimeric antibody
Applications:	Neutralization
Specificity:	Human IL6 / IL-6
Formulation:	0.2 µm filtered solution in PBS
Storage:	< -20°C

## Preparation

It is a chimeric monoclonal antibody combining the constant domains of the human IgG1 molecule with mouse variable regions. The variable region was obtained from a mouse immunized with purified, recombinant Human IL6 / IL-6. The antibody was produced using recombinant antibody technology.

## Specificity

Human IL6 / IL-6

**No cross-reactivity** with rat IL6 (Catalog#80076-RNAE) and mouse IL6 (Catalog#50136-MNAE) in ELISA assay

## Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

## Background

Interleukin-6 (IL-6) is a multifunctional  $\alpha$ -helical cytokine that regulates cell growth and differentiation of various tissues, which is known particularly for its role in the immune response and acute phase reactions. IL-6 protein is secreted by a variety of cell types including T cells and macrophages as phosphorylated and variably glycosylated molecule. It exerts actions through its heterodimeric receptor composed of IL-6R that lacks the tyrosine/kinase domain and binds IL-6 with low affinity, and ubiquitously expressed glycoprotein 130 (gp130) that binds the IL-6. IL-6R complex with high affinity and thus transduces signals. IL-6 is also involved in hematopoiesis, bone metabolism, and cancer progression, and has been defined an essential role in directing transition from innate to acquired immunity.

## Reference

Heinrich PC, et al. (2003). Principles of interleukin-6-type cytokine signalling and its regulation. *Biochem J*. 374: 1-20.

Rose-John S, et al. (2007) The IL-6/sIL-6R complex as a novel target for therapeutic approaches. *Expert Opin Ther Targets*. 11 (5): 613-24.

Dinh W, et al. (2009) Elevated plasma levels of TNF-alpha and interleukin-6 in patients with diastolic dysfunction and glucose metabolism disorders. *Cardiovasc Diabetol*. 8:58.

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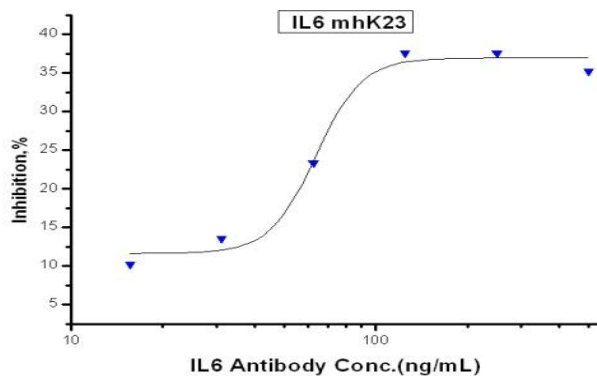
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## Applications

**Block** - Human IL6ST Fc chimera do not bind IL-6 by itself, but is required for high-affinity binding to the complex consisting of IL6 and IL6R. In a functional ELISA which immobilized Human IL6ST Fc chimera (Catalog#10974-H03H) at 2 µg/mL (100 µL/well) in the plate, the Mouse and Human Chimeric anti-Human IL6 Monoclonal Antibody (Catalog#10395-mhK23) can block the complex consisting of IL6 (Catalog#10395-HNAE) at 0.2 µg/mL and IL6R (Catalog#10395-HNAE) at 0.2 µg/mL binding to Human IL6ST Fc chimera, the EC<sub>50</sub> is 0.53 µg/mL.

**Neutralization** - The neutralization activity of IL6 Neutralizing Antibody is measured by its ability to neutralize IL6 induced proliferation in the T1165 mouse plasmacytoma cell line. The antibody Neutralizing Titer (IC<sub>50</sub>) is typically 32.0-128.0 ng/mL in the presence of 10 ng/mL Recombinant Human IL6 (Catalog#10395-HNAE).



**Cell Proliferation Induced by IL6 and Neutralization by Human IL6 Antibody.** Recombinant Human IL6 (Catalog#10395-HNAE) stimulates proliferation in the T1165 mouse plasmacytoma cell line. Proliferation elicited by 10 ng/mL of Recombinant Human IL6 is neutralized by increasing concentrations of Human IL6 neutralizing Monoclonal Antibody (Catalog#10395-mhK23). The IC<sub>50</sub> is typically 32.0-128.0 ng/mL.