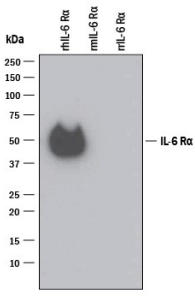
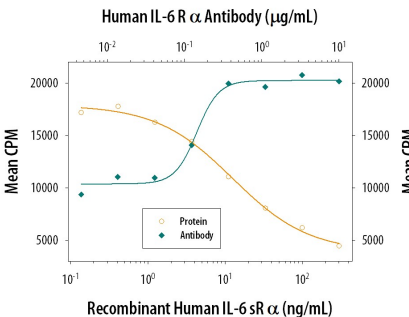


DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-6 R $\alpha$ in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-6 R $\alpha$ Leu20-Asp358 Accession # P08887
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ m filtered solution in PBS.

APPLICATIONS		
<b>Please Note:</b> Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 $\mu$ g/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize IL-6 R $\alpha$ -mediated inhibition of proliferation in the M1 mouse myeloid leukemia cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.2-0.4 $\mu$ g/mL in the presence of 30 ng/mL Recombinant Human IL-6 R $\alpha$ and 30 ng/mL Recombinant Human IL-6.	

DATA	
<p><b>Western Blot</b></p>  <p><b>Detection of Recombinant Human IL-6 R<math>\alpha</math> by Western Blot.</b> Western blot shows 5 ng of Recombinant Human IL-6 R<math>\alpha</math> (Catalog # 227-SR), Recombinant Mouse IL-6 R<math>\alpha</math> (Catalog # 1830-SR) and Recombinant Rat IL-6 R. PVDF Membrane was probed with 0.1 <math>\mu</math>g/mL of Goat Anti-Human IL-6 R<math>\alpha</math> Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-227-NA) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for IL-6 R<math>\alpha</math> at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.</p>	<p><b>Neutralization</b></p>  <p><b>IL-6 R<math>\alpha</math> Enhancement of IL-6-dependent Inhibition of Cell Proliferation and Neutralization by Human IL-6 R<math>\alpha</math> Antibody.</b> Recombinant Human IL-6 R<math>\alpha</math> (Catalog # 227-SR) enhances Recombinant Human IL-6 (Catalog # 206-IL) inhibition of proliferation in the M1 mouse myeloid leukemia cell line in a dose-dependent manner (orange line). Enhancement of Recombinant Human IL-6 (30 ng/mL) activity elicited by Recombinant Human IL-6 R<math>\alpha</math> (30 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-6 R<math>\alpha</math> Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-227-NA). The ND<sub>50</sub> is typically 0.2-0.4 <math>\mu</math>g/mL.</p>

PREPARATION AND STORAGE	
<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The multi-functional factor interleukin 6 (IL-6) exerts its activities through binding to a high-affinity receptor complex consisting of two membrane glycoproteins: an 80 kDa component receptor that binds IL-6 with low affinity (IL-6 R $\alpha$ ) and a signal-transducing component of 130 kDa (gp130) that does not bind IL-6 by itself, but is required for high-affinity binding of IL-6 by the complex. Both components of the receptor complex, IL-6 R $\alpha$  and gp130 have been cloned, sequenced, and expressed (1-4).

A soluble form of the IL-6 R $\alpha$  has been found in the urine of healthy adult humans (5). This soluble receptor apparently arises from proteolytic cleavage of membrane-bound IL-6 R $\alpha$  and is about 50kDa in size. No naturally-occurring mRNA encoding a truncated form of the IL-6 R $\alpha$  has been reported. Soluble forms of human and murine IL-6 Ras have been constructed, however, by insertion of termination codons into the regions of the IL-6 R $\alpha$  cDNAs encoding the external portions of the receptors and prior to the transmembrane domains. These soluble receptors have been expressed in COS-7 and CHO cells and have been shown to bind to IL-6 in solution and to augment the activity of IL-6 as a result of the binding of the IL-6/IL-6 R $\alpha$  complex to membrane-bound gp130 (6, 7).

## References:

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5. Novick *et al.* (1989) *J. Exp. Med.* **170**:1409.
6. Yasukawa *et al.* (1990) *J. Biochem.* **108**:673.
7. Saito *et al.* (1991) *J. Immunology* **147**:168.