

DESCRIPTION

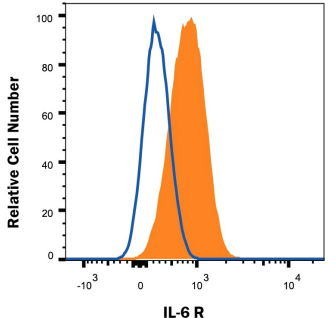
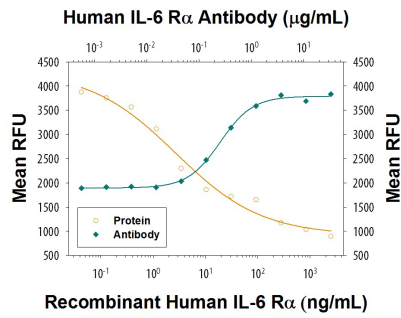
Species Reactivity	Human
Specificity	Detects human IL-6 R α in ELISAs and Western blots. In ELISAs, no cross-reactivity or interference was observed with recombinant human (rh) IL-1 α , recombinant mouse (rm) IL-1 α , rhIL-1 β , rmlL-1 β , rhIL-1ra, rhIL-2, rhIL-3, rmlL-3, rhIL-4, rmlL-4, rhIL-5, rmlL-5, rhIL-6, rmlL-6, rhIL-7, rmlL-7, rhIL-8, rhIL-9, rmlL-9, rhIL-10, or rhIL-11.
Source	Recombinant Monoclonal Mouse IgG ₁ Clone # 17506R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human IL-6 R α Leu20-Asp339 Accession # P08887
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ 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 μ m filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 μ g/mL	Recombinant Human IL-6 R α (Catalog # 227-SR)
Flow Cytometry	0.25 μ g/10 ⁶ cells	See Below
Human IL-6 Rα Sandwich Immunoassay		Reagent
ELISA Capture	2-8 μ g/mL	Human IL-6 R α Antibody (Catalog # MAB227R)
ELISA Detection	0.1-0.4 μ g/mL	Human IL-6 R α Biotinylated Antibody (Catalog # BAF227)
Standard		Recombinant Human IL-6 R α (Catalog # 227-SR)
CyTOF-ready		Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.
Neutralization		Measured by its ability to neutralize IL-6 R α -mediated enhancement of IL-6-dependent inhibition of cell proliferation in the M1 mouse myeloid leukemia cell line. The Neutralization Dose (ND ₅₀) is typically 0.04-0.2 μ g/mL in the presence of 30 ng/mL Recombinant Human IL-6 R α and 30 ng/mL Recombinant Human IL-6.

DATA

<p>Flow Cytometry</p>  <p>Detection of IL-6 Rα in U937 Human Cell Line by Flow Cytometry. U937 human histiocytic lymphoma cell line was stained with Human IL-6 Rα Monoclonal Antibody (Catalog # MAB227R, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG(F(ab')₂ Secondary Antibody (Catalog # F0102B). View our protocol for Staining Membrane-associated Proteins.</p>	<p>Neutralization</p>  <p>IL-6 Rα Enhancement of IL-6-dependent Inhibition of Cell Proliferation and Neutralization by Human IL-6 Rα Antibody. Recombinant Human IL-6 Rα (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) as measured by Resazurin (Catalog # AR002). Enhancement of Recombinant Human IL-6 (30 ng/mL) activity elicited by Recombinant Human IL-6 Rα (30 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-6 Rα Monoclonal Antibody (Catalog # MAB227R). The ND₅₀ is typically 0.04-0.2 μg/mL.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 α) 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 α and gp130 have been cloned, sequenced, and expressed (1-4).

A soluble form of the IL-6 R α 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 α and is about 50kDa in size. No naturally-occurring mRNA encoding a truncated form of the IL-6 R α 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 α 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 α complex to membrane-bound gp130 (6, 7).

References:

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2. Baumann *et al.* (1990) *J. Biol. Chem.* **265**:19853.
3. Hibi *et al.* (1990) *Cell* **63**:1149.
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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.