Recombinant Human IL-6 Rα

Catalog Number: 227-SR

DESCRIPTION

Source	*Spodoptera frugiperda*, *Sf* 21 (baculovirus)-derived Leu20-Asp358 Accession # P08887.1
N-terminal Sequence Analysis	Leu20
Predicted Molecular Mass	38 kDa

SPECIFICATIONS

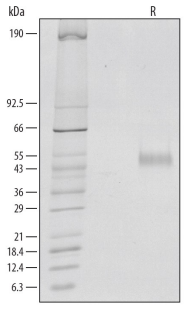
SDS-PAGE	45-50 kDa, reducing conditions
Activity	Measured by its ability to enhance the IL-6 activity on M1 mouse myeloid leukemia cells. Saito, T. *et al.* (1991) J. Immunol. **147**:168. The ED_{50} for this effect is typically 5.0-15.0 ng/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

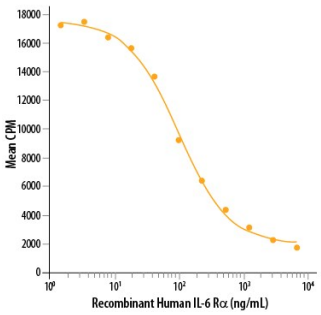
DATA

SDS-PAGE



1 µg/lane of Recombinant Human IL-6 Rα was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 45–50 kDa.

Bioactivity



Recombinant Human IL-6 Rα (Catalog # 227-SR) enhances the IL-6 activity on the M1 mouse myeloid leukemia cell line. The ED_{50} for this effect is typically 5-15 ng/mL.

BACKGROUND

The multifunctional 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-6Rα) 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-6Rα and gp130 have been cloned, sequenced, and expressed (1 - 4).

A soluble form of the IL-6Rα has been found in the urine of healthy adult humans (5). This soluble receptor apparently arises from proteolytic cleavage of membrane-bound IL-6Rα. No naturally-occurring mRNA encoding a truncated form of the IL-6Rα has been reported. Soluble forms of human and murine IL-6Rαs have been constructed, however, by insertion of termination codons into the regions of the IL-6Rα 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-6Rα complex to membrane-bound gp130 (6, 7).

References:

1. Yamasaki *et al.* (1988) Science **241**:825.
2. Baumann *et al.* (1990) J. Biol. Chem. **265**:19853.
3. Hibi *et al.* (1990) Cell **63**:1149.
4. Schooltink *et al.* (1991) Eur. J. Biochem. **277**:659.
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.

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