

## IL-6R Protein, Human, Recombinant (His & Avi), Biotinylated

### General Information

Synonyms:	CD126;IL-6RA;IL6RA;IL-6R-1;IL-6R;IL6Q;interleukin 6 receptor;gp80;IL6RQ
Protein Construction:	A DNA sequence encoding the human IL6R (NP_000556.1)(Met1-Pro365) was expressed with a C-terminal polyhistidine tag followed by an AVI tag. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Leu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	A0N0L5
Molecular Weight:	41.80 kDa (predicted); 60.56 kDa (reducing conditions)

### QC Testing

Biological Activity:	Immobilized Human IL-6 at 2 µg/mL (100 µL/well) can bind Human IL-6R, Biotinylated, the EC50 of Human IL-6R, Biotinylated is 20-160 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Interleukin 6 receptor (IL-6R) also known as CD126 (Cluster of Differentiation 126) is a type I cytokine receptor. The low concentration of a soluble form of IL-6 receptor (SIL-6R) acts as an agonist of IL-6 activity. In the IL-6R/CD126/IL6R system, both a membrane-bound IL-6R and a SIL-6R protein can mediate IL-6 signals into the cells

through the interaction of gp130. The resulting IL-6/sIL-6R protein complex is also capable of binding to gp130 and inducing intracellular signaling. Through this so-called 'trans-signaling' mechanism, IL-6 can stimulate cells that lack an endogenous mIL-6R. High levels of IL-6 and SIL-6R have been reported in several chronic inflammatory and autoimmune diseases as well as in cancer. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### Reference

Barill S, et al. (2000) The role of interleukin-6 and interleukin-6/interleukin-6 receptor-alpha complex in the pathogenesis of multiple myeloma. *Eur Cytokine Netw.* 11(4): 546-51.

Kang KW, et al. (2007) Novel role of IL-6/SIL-6R signaling in the expression of inducible nitric oxide synthase (iNOS) in murine B16, metastatic melanoma clone F10.9, cells. *Free Radic Biol Med.* 42(2): 215-27.

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