

## IL-6R Protein, Rat, Recombinant (His)

### General Information

Synonyms:	interleukin 6 receptor
Protein Construction:	A DNA sequence encoding the rat IL6r (NP_058716.2) (Met1-Pro364) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 20
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	A6J6I0
Molecular Weight:	39.5 kDa (predicted)

### QC Testing

Biological Activity:	Measured by its ability to bind human IL6 in functional ELISA.
Purity:	> 90 % 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 IL-6R. High levels of IL-6 and IL-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/IL-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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