

#### DESCRIPTION

<b>Source</b>	<i>Spodoptera frugiperda</i> , Sf 21 (baculovirus)-derived human Common gamma Chain/IL-2 R gamma protein Leu23-Asn254, with a C-terminal 6-His tag Accession # P31785
<b>N-terminal Sequence Analysis</b>	Leu23
<b>Predicted Molecular Mass</b>	28.2 kDa

#### SPECIFICATIONS

<b>SDS-PAGE</b>	40 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to inhibit the IL-2-dependent proliferation of MO7e human megakaryocytic leukemic cells. The ED <sub>50</sub> for this effect is typically 0.6-3.6 $\mu$ g/mL in the presence of 30 $\mu$ g/mL of soluble IL-2 R $\beta$ and 10 ng/mL of recombinant human IL-2.
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the protein by the LAL method.
<b>Purity</b>	>97%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS. See Certificate of Analysis for details.

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 500 $\mu$ g/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<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>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

The  $\gamma$  chain of the high affinity functional human IL-2 receptor complex belongs to the hematopoietin receptor family. IL-2 R $\gamma$  is a 369 amino acid residue protein consisting of a 22 residue signal sequence, a 232 residue extracellular domain, a 29 residue transmembrane domain and an 86 residue cytoplasmic domain. Although IL-2 R $\gamma$  by itself does not bind IL-2 with any appreciable affinity, it is required for IL-2 receptor signaling. Besides IL-2, the  $\gamma$  chain has been shown to be a component of the functional receptor complexes for IL-4, IL-7, IL-9 and IL-15. It has been proposed that IL-2 R $\gamma$  be designated the common  $\gamma$  chain ( $\gamma_c$ ). The site of molecular defects in X-linked SCID (severe combined immunodeficiency) has now been mapped to the IL-2 R $\gamma$  gene.

#### References:

1. Minami, Y. *et al.* (1993) *Annu. Rev. Immunol.* **11**:245.
2. Noguchi, M. *et al.* (1993) *Science* **262**:1877.