

#### DESCRIPTION

<b>Source</b>	Mouse myeloma cell line, NS0-derived human CD25/IL-2R alpha protein		
	Human CD25/IL-2 R $\alpha$ (Glu22-Cys213) Accession # Q5W007	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Glu22		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	48.3 kDa (monomer)		

#### SPECIFICATIONS

<b>SDS-PAGE</b>	65 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to inhibit the IL-2-dependent proliferation of MO7e human megakaryocytic leukemic cells. Avanzi, G. <i>et al.</i> (1988) Br. J. Haematol. <b>69</b> :359. The ED <sub>50</sub> for this effect is 0.150-1.80 $\mu$ g/mL.
<b>Endotoxin Level</b>	<0.01 EU per 1 $\mu$ g of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
<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 100 $\mu$ 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>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

Human IL-2 receptor alpha (IL-2 R $\alpha$ ), also known as Tac antigen and CD25, was initially identified as a 55 kDa membrane glycoprotein that is capable of binding IL-2. The IL-2 R $\alpha$  cDNA encodes a 272 amino acid residue precursor type I membrane protein with a 21 residue signal peptide, a 219 residue extracellular region, a 19 residue transmembrane region and a 13 residue cytoplasmic domain. IL-2 R $\alpha$  lacks structural features characteristic of members of the cytokine receptor superfamily. By itself, IL-2 R $\alpha$  binds IL-2 with low affinity. However, when IL-2 R $\alpha$  is associated with the IL-2 receptor beta and gamma chains, a high affinity heterotrimeric receptor complex that transduces IL-2 signals is formed.

Soluble forms of many cytokine receptors have been reported, and a soluble form of IL-2 R $\alpha$  (IL-2 sR $\alpha$ ) appears in serum, concomitant with its increased expression on cells. The function of the soluble IL-2 R $\alpha$  is unclear. Increased levels of IL-2 sR $\alpha$  in biological fluids reportedly correlate with increased T and B cell activation and immune system activation. Increased serum concentration of IL-2 sR $\alpha$  has been observed in patients with a variety of inflammatory conditions and in the course of some leukemias and lymphomas.