

# Growth Factor Data Sheet

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IL2 is a powerful immunoregulatory lymphokine produced by T-cells in response to antigenic or mitogenic stimulation. It is expressed by CD4+ and CD8+ T-cells,  $\gamma\delta$  T-cells, B-cells, dendritic cells, and eosinophils. The receptor for IL2 consists of three subunits that are present on the cell surface in varying preformed complexes. The 55 kDa IL2 R $\alpha$  is specific for IL2 and binds with low affinity. The 75 kDa IL2 R $\beta$ , which is also a component of the IL15 receptor, binds IL2 with intermediate affinity. The 64 kDa common gamma chain  $\gamma c$ /IL2 R $\gamma$ , which is shared with the receptors for IL4, IL7, IL9, IL15 and IL21, does not interact independently with IL2. Upon ligand binding, signal transduction is performed by both IL2 R $\beta$  and  $\gamma c$ . It drives resting T-cells to proliferate and induces IL2 and IL2 R $\alpha$  synthesis. It contributes to T-cell homeostasis by promoting the Fas-induced death of naive CD4+ T-cells but not activated CD4+ memory lymphocytes. IL2 plays a central role in the expansion and maintenance of regulatory T-cells, although it inhibits the development of Th17 polarized cells.

<b>Catalog Number</b>	<b>1510-02</b>
<b>Product Name</b>	<b>IL2, Rat</b> Recombinant Rat Interleukin 2 IL-2, IL2 T-cell Growth Factor (TCGF)
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~15.5 kDa (135 amino acids)
<b>Sequence</b>	APTSSPAKET QQHLEQLLLD LQVLLRGIDN YKNLKLPMML TFKFYLPKQA TELKHLQCLE NELGALQRVL DLTQSKSFHL EDAGNFISNI RVTVVVKLKGK ENKFECQFDD EPATVVEFLR RWIAICQSII STMTQ
<b>Accession Number</b>	<a href="#">P17108</a>
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine CTLL-2 cells is less than 0.2 ng/ml, corresponding to a specific activity of $>5.0 \times 10^6$ IU/mg.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.