Growth Factor Data Sheet

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Mature human Interleukin 2 (IL2) shares 58% amino acid sequence identity with murine IL2. Human IL2 and mouse IL2 exhibit cross-species activity. The receptor for IL2 consists of three subunits that are present on the cell surface in varying preformed complexes. The 55 kDa IL2 Rα is specific for IL2 and binds with low affinity. The 75 kDa IL2 Rβ, which is also a component of the IL15 receptor, binds IL2 with intermediate affinity. The 64 kDa common gamma chain γc/IL2 Rγ, 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 Rβ and γc. It drives resting T-cells to proliferate and induces IL2 and IL2 Rα 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.

Catalog Number **Product Name**	**1110-02** **IL2, Human** Recombinant Human Interleukin 2 IL-2 T-Cell Growth Factor
Source	*Escherichia coli*
MW	~15.5 kDa (134 amino acid)
Sequence	APTSSSTKKT QLQLEHLLLD LQMILNGINN YKNPKLTRML TFKFYMPKKA TELKHLQCLE EELKPLEEVL NLAQSKNFHL RPRDLISNIN VIVLELKGSE TTFMCEYADE TATIVEFLNR WITFCQSIIS TLT
Accession Number	P60568
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using murine CTLL-2 cells is less than 0.1 ng/ml, corresponding to a specific activity of $>1.0 \times 10^7$ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture
Storage/Handling	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.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using sterile distilled water 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 apportioned into working aliquots and stored at -80°C. Further dilutions should be made in appropriate buffered solutions.