

### General Information

Synonyms	Aldesleukin; IL2; IL-2; IL-2lymphokine; interleukin 2; interleukin-2; T-cell growth factor; TCGF
Accession #	P04351
Source	Human embryonic kidney cell, HEK293-derived mouse IL-2 protein
	Ala21-Gln169
Predicted Molecular weight	17.2kDa

### Components and Storage

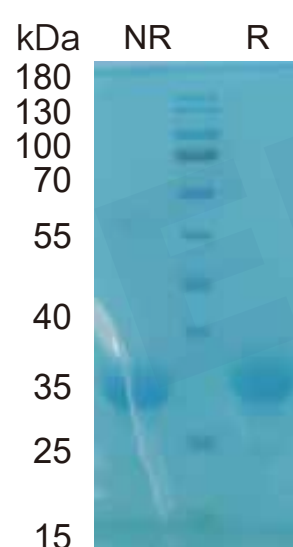
Formulation	Solution protein. Dissolved in sterile PBS buffer . This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 ° C as supplied.

Shipping Shipping with dry ice

### Quality

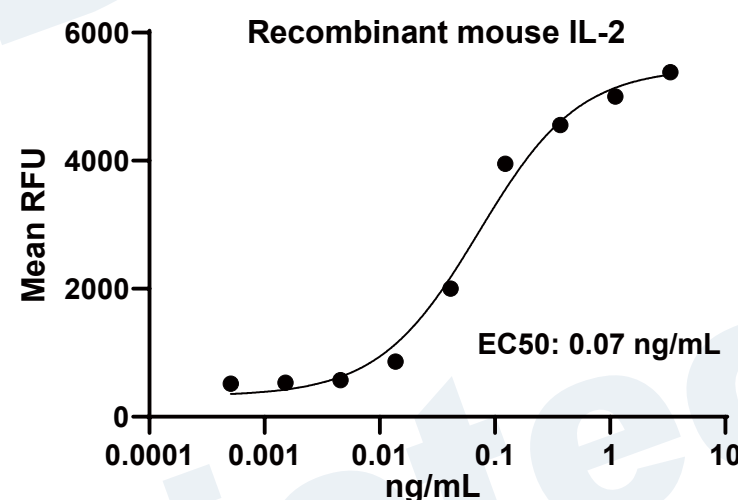
Purity	> 95%, determined by SDS-PAGE
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method
Activity	Measured in a cell proliferation assay using CTLL-2 mouse cytotoxic T cells. The EC50 for this effect is 0.01-0.1 ng/mL.

### SDS-PAGE



4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

### Bioactivity



Recombinant mouse IL-2 (Catalog # MF-1002) stimulates cell proliferation of the CTLL-2 mouse cytotoxic T cells.

### Background

**Interleukin-2 (IL-2)** is a O-glycosylated four alpha-helix bundle cytokine that has potent stimulatory activity for antigen-activated T cells. It is expressed by CD4+ and CD8+ T cells, gamma delta T cells, B cells, dendritic cells, and eosinophils (1-3). Mature mouse IL-2 shares 56% and 73% aa sequence identity with human and rat IL-2, respectively. It shows strain-specific heterogeneity in an N-terminal region that contains a poly-glutamine stretch (4). Mouse and human IL-2 exhibit cross-species activity (5). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (6-8). The 55 kDa IL-2 R alpha is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 R beta, which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain gamma c/IL-2 R gamma, which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 R beta and gamma c. IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells to proliferate and induces IL-2 and IL-2 R alpha synthesis (1, 2). It contributes to T cell homeostasis by promoting the Fas-induced death of na $\times$ ve CD4+ T cells but not activated CD4+ memory lymphocytes (9). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (10-12). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (13, 14).

### Reference

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