Epoto Biotech

南京艾璞拓生物科技有限公司

Recombinant Human IL2, Tag Free

Catalog Number: HF-1002

General Information

Synonyms	Human IL2; IL-2; IL-2; IL2; interleukin-2
Accession #	P60568
Source	Human embryonic kidney cell, HEK293-derived human IL2 protein
	Ala21-Thr153
Predicted Moleucular weight	15.4 kDa

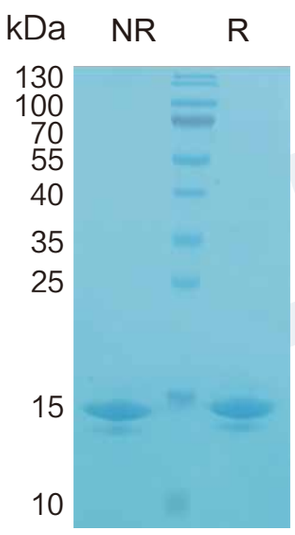
Components and Storage

Formulation	Solution protein.
	Dissolved in sterile PBS buffer to a concentration of 0.2 mg/mL.
	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

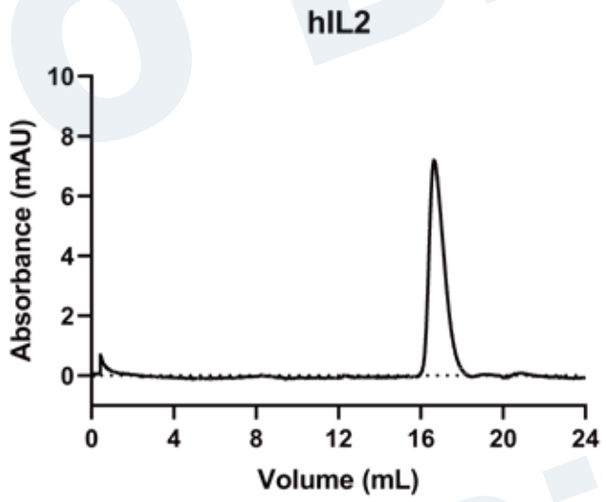
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using CTLL-2 mouse cytotoxic T cells.
	The EC50 for this effect is 0.05-0.25 ng/mL.

SDS-PAGE



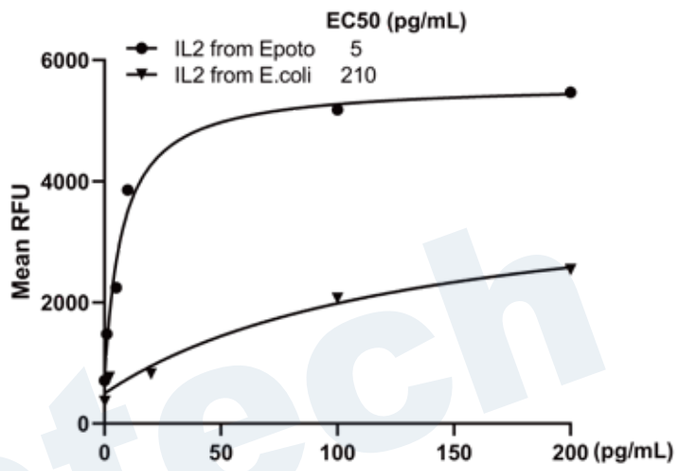
2 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant human IL2 protein (280 nm absorbance)

Bioactivity



Recombinant Human IL2 (Catalog # HF-1002) stimulates cell proliferation of the CTLL-2 mouse cytotoxic T cell line.

Background

Interleukin-2 (IL2), also known as a T-cell growth factor, TCGF, and Aldesleukin, is a secreted protein that belongs to the IL-2 family. IL2 has potent stimulatory activity for antigen-activated T cells, and is expressed by T cells, B cells, dendritic cells, and eosinophils (1-3). Mature human IL-2 shares 56% aa sequence identity with mouse IL-2. Human and mouse IL-2 exhibit cross-species activity (4). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (5-7). The 55 kDa IL-2 R alpha is specific for IL-2 and binds with low affinity. The 75 kDa IL-2R 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 naive CD4+ T cells but not activated CD4+ memory lymphocytes (8). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (9-11). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (12, 13).

Reference

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