

Recombinant human IL-2

Mammalian cell-expressed human interleukin 2 (IL-2)

Cat. codes: rcyc-hil2, rcyc-hil2-2, rcyc-hil2-5

<https://www.invivogen.com/human-il2>

For research use only

Version 24I03-AK

PRODUCT INFORMATION

Contents

Recombinant human IL-2 is provided lyophilized and is available in three quantities:

- **rcyc-hil2:** 50 µg
- **rcyc-hil2-2:** 2 x 50 µg
- **rcyc-hil2-5:** 5 x 50 µg

Note: These products are sterile filtered prior to lyophilization.

- 1.5 ml endotoxin-free water for **rcyc-hil2** and **rcyc-hil2-2**.
- 2 x 1.5 ml endotoxin-free water for **rcyc-hil2-5**

Storage and stability

- Recombinant human IL-2 is shipped at room temperature. Upon receipt it should be immediately stored at -20 °C. Lyophilized product is stable for 12 months at -20 °C.
- Upon resuspension, prepare aliquots of recombinant human IL-2 and store at 4 °C for up to 1 week or at -20 °C to -80 °C for up to 12 months.

Note: Avoid repeated freeze-thaw cycles.

Quality control

- Purity: ≥ 95% (SDS-PAGE)
- Endotoxin level: ≤ 0.1 EU/µg (LAL assay)
- The biological activity is confirmed using **HEK-Blue™ IL-2 cells**.

Characteristics

- Alternative name: T cell growth factor (TCGF), interleukin 2
- Source: Mammalian; Chinese hamster ovary (CHO) cells
- Molecular mass: ~15.5 kDa (SDS PAGE)
- Carrier-free
- Tag-free
- UniProt ID: P60568
- Protein sequence: Ala21-Thr153
- Formulation: Recombinant human IL-2 was lyophilized from a 0.2 µm filtered 20 mM Sodium Phosphate, 150 mM NaCl, and 5% saccharose buffer solution (pH 7).
- Solubility: 100 µg/ml in water
- IU/mg: *Please refer to the corresponding certificate of analysis (CoA)*

APPLICATIONS

- Cellular assays
- Cell culture (T cell activation and expansion)
- CAR T cell studies
- ELISA

PRODUCT DESCRIPTION

Interleukin 2 (IL-2) is a pleiotropic cytokine showing immunostimulatory or immunoinhibitory activity, depending on the target cell¹. It is mainly produced by activated CD4⁺ T cells in response to antigen stimulation. To a lesser extent, it can also be produced by CD8⁺ T cells and innate immune cells, such as activated dendritic cells and natural killer cells¹. IL-2 acts on lymphocytes by binding to the multimeric IL-2 receptor (IL-2R) and thereby engaging several intracellular signaling pathways that modulate lymphocyte survival, proliferation, and function². Recombinant IL-2 (Aldesleukin) became the first FDA-approved immunotherapeutic drug for the treatment of metastatic renal cell carcinoma (RCC) and metastatic melanoma².

InvivoGen's recombinant human interleukin 2 is intended for use in cell culture applications, such as T cell expansion. It is produced in Chinese hamster ovary (CHO) cells. Production of recombinant proteins in mammalian cells ensures protein glycosylation and *bona fide* 3D structure.

1. Pol JG, et al., 2020. Effects of interleukin-2 in immunostimulation and immunosuppression. *J Exp Med.* 217(1):e20191247. 2. Wrangle JM, et al., 2018. IL-2 and Beyond in Cancer Immunotherapy. *J Interferon Cytokine Res.*38(2):45-68.

METHODS

Preparation of stock solution (100 µg/ml):

1. Add 500 µl endotoxin-free water (provided) to 50 µg of recombinant hIL-2 and mix gently by pipetting until completely resuspended.
2. Use immediately or prepare aliquots and store at 4 °C for 1 week or at -20 °C to -80 °C for up to 12 month.

Avoid freeze-thaw cycles.

3. Further dilutions can be prepared in the appropriate aqueous buffer, such as cell culture medium containing serum.

RELATED PRODUCTS

Product	Cat. Code
HEK-Blue™ IL-2 cells	hkb-il2
bsAb CD3-CD28 for T cell expansion	bsab-tex-1

TECHNICAL SUPPORT

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