

Recombinant Human Interleukin-2(rHuIL-2) (C125S)

Acnovia Data Sheet

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| Catalog#/ Size: | AC52350/100 µg. |
| Source: | <i>Escherichia coli</i> . |
| Molecular Weight: | Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 134 amino acid. |
| Description : | Accession #P60568.1, Ala21-Thr153 (C125S) , with an N-terminal Met. |
| SDS-PAGE: | 15.5 kDa, reducing conditions. |
| Purity: | >95%, as determined by SDS-PAGE, under reducing non-reducing conditions, visualized by coomassie staining. |
| Endotoxin: | Less than 0.1 EU/µg of rHuIL-2 as determined by kinetic Limulus Amoebocyte Lysate (LAL) assay. |
| Biological Activity: | Recombinant human IL-2 bioactivity is measured in a cell proliferation assay using CTLL-2 mouse cytotoxic T cells, the EC50 for this effect is 2.492 to 3.037 ng/mL. |
| Physical Appearance: | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Formulation: | Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB pH 3.5 with 10% trehalose anhydrous. |
| Reconstitution: | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute to a concentration of 0.1-1.0 mg/mL in sterile distilled H₂O . Stock solutions should be apportioned into working aliquots and stored at -20°C to -70°C . Further dilutions should be made in appropriate buffered solutions. Do not reconstitute in cell culture media directly. |
| Shipping: | The product is shipped at 2°C to 8°C . Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage: | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 12 months from date of shipping when stored at -20°C to -70°C as supplied. 4 weeks at 2°C to 8°C under sterile conditions after reconstitution. 4 months at -20°C to -70°C under sterile conditions after reconstitution. |
| Usage: | Acnovia rHuIL-2 product can be used for a variety of ex vivo cell culture applications such as research or further manufacturing. |
| Quality statement: | No animal- or human-derived materials were used for the manufacture of this product, unless otherwise stated in the respective Certificate of Origin. |

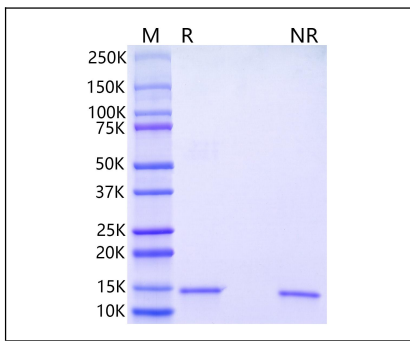
Background:

IL-2, also named T-cell growth factor, was first discovered in 1976 and was characterized as a soluble factor with the unique ability to promote clonal expansion of many hematopoietic lines including regulatory T cells (Tregs) in vitro. Human IL-2 has 133 amino acids and in mature form it is a glycosylated globular protein of 15.5 kDa four-bundle, α -helical protein member of the common cytokine receptor γ -chain family of cytokines. IL-2 is predominantly produced by activated CD4⁺ T cells and, to a lesser extent by activated CD8⁺ T cells, activated dendritic cells, natural killer (NK) cells, NKT cells, as well as B cells.

Application References:

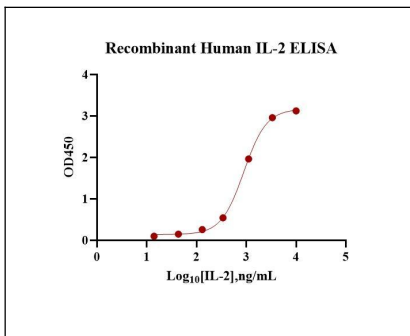
1. Liao W, *et al.* 2013. *Immunity*. 38:13-25.
2. Sakaguchi S, *et al.* 2008. *Cell*. 133:775-87.
3. Kryczek, I. *et al.* 2007. *J. Immunol.* 178:6730.
4. Cote-Sierra J, *et al.* 2004. *Proc Natl Acad Sci USA*. 101:3880-5.

DATA:



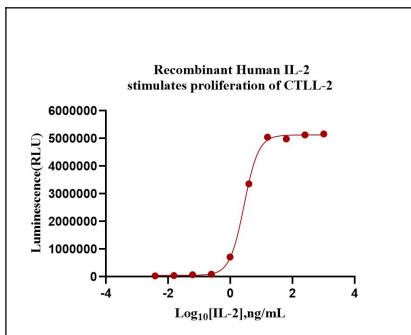
SDS-PAGE

Recombinant Human IL-2 Protein SDS-PAGE 1 μ g/lane of Recombinant Human IL-2 (Catalog # AC52350) was resolved with SDS-PAGE under reducing(R) and non-reducing (NR) conditions visualized by coomassie staining showing a single band at 15.5 kDa.



Bioactivity-ELISA

Immobilized Recombinant Human IL-2 (Catalog # AC52350) at 0.2 μ g/well can bind Human IL-2 R alpha, Fc Tag, with a linear range of 803.1 to 987.6 ng/mL.



Bioactivity-Cell based assay

Recombinant Human IL-2 (Catalog # AC52350) stimulates proliferation of CTLL-2 cells, the EC₅₀ for this effect is 2.492 to 3.037 ng/mL.