

Recombinant Human Interleukin-2 (rHuIL-2) (C125A)

Acnovia Data Sheet

Catalog#/ Size:	AC52388/100 µg.
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 134 amino acid.
Description :	Accession #P60658.1, Ala21-Thr153 (C125A) , with an N-terminal Ser.
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 0.01 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 5.214 to 6.755 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.

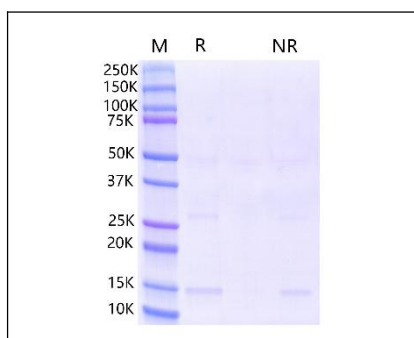
Background:

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:

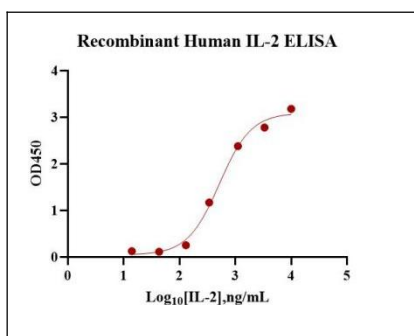
1. Liao W, *et al.* 2013. *Immunity*. 38:13-25.
2. Sakaguchi S, *et al.* 2008. *Cell*. 133:775-87.
3. Kryczek, I. *et al.* 2007. *J. Immunol.* 178:6730.
4. Cote-Sierra J, *et al.* 2004. *Proc Natl Acad Sci USA*. 101:3880-5.

DATA:



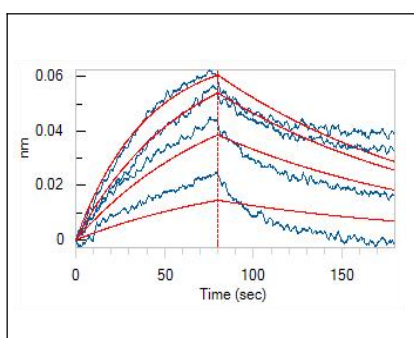
SDS-PAGE

Recombinant Human IL-2 Protein SDS-PAGE 1 μ g/lane of Recombinant Human IL-2(Catalog #AC52388) was resolved with SDS-PAGE under reducing(R) and non-reducing (NR) conditions visualized by coomassie staining showing a single band at 15 kDa.



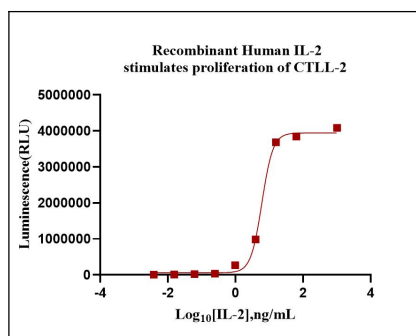
Bioactivity-ELISA

Immobilized Recombinant Human IL-2(Catalog #AC52388) at 0.2 μ g/well can bind Human IL-2 R alpha, Fc Tag , with a linear range of 430.4 to 632.4 ng/mL.



Bioactivity-BLI

Loaded Human IL-2 R alpha, can bind Recombinant Human IL-2(Catalog # AC52388) with an affinity constant of 4.55 nM as determined in BLI assay (Octet[®] R8) .



Bioactivity-Cell based assay

Recombinant Human IL-2(Catalog #AC52388)stimulates proliferation of CTL-2 cells, the EC50 for this effect is 5.214 to 6.755 ng/mL.