Recombinant Human IL-2 Protein (high-efficiency)

Size / Cat.No.: 100μg /GMP-TL906-0100

Product Name	
Generic Name	Recombinant Human IL-2 Protein
Synonym	TCGF, lymphokine, Interleukin 2

Product Information	
Expression Host	E.coli
QC Testing Purity	> 90 % as determined by SDS-PAGE
Activity	Determined by the dose-dependent stimulation of the proliferation of CTLL-2 cells ,corresponding to a activity of ≥1x10^{7}U/mg.
Endotoxin	< 0.1EU per 1 μg of the protein by the LAL method.
Molecular Mass	The recombinant human IL-2 protein predicts a molecular mass of 15.4 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	Lyophilized preparation can be stored at 2-8 ℃. 6 months at -20℃ under sterile conditions after reconstitution. 12 months at -80℃ under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100μg/mL. Avoid repeated freeze-thaw cycles.

Background

Activated T cells generally cannot survive for a long time in vitro culture, and the addition of IL-2 can promote their long-term and sustained proliferation. The surface of stationary T cells does not express IL-2R and does not respond to IL-2; T cells activated by mitogen or other stimuli can express IL-2R and become target cells of IL-2; IL-2 can also induce increased IL-2R expression in target cells. The expression of IL-2R on T cells is transient, generally reaching its peak 2-3 days after activation and disappearing around 6-10 days. With the disappearance of IL-2R, T cells lose their ability to respond to IL-2. Therefore, in order to maintain the long-term growth of normal T cells in vitro, it is necessary to constantly stimulate T cells with mitogen or other stimulators to maintain the expression of IL-2R. NK cells are the only lymphoid cells that normally express IL-2R, and therefore always maintain reactivity to IL-2. However, only IL-2R is expressed on stationary NK cells β Chain and γ Chains have a low affinity for IL-2 and can only react with high concentrations of IL-2. Once NK cells are activated, they express IL-2R α Chain, becoming a high affinity receptor.

References

1. YaoWang, Hanren Dai, Hong Li, Haiyan Lv,TaoWang, Xiaobing Fu,and WeidongHan. Growth of Human Colorectal Cancer SW1116 Cells Is Inhibited by Cytokine-Induced Killer Cells Clinical and Developmental Immunology Volume 2011, Article ID 621414, 9 pages doi:10.1155/2011/621414.

2. D Sangiolo†, G Mesiano, F Carnevale-Schianca, W Piacibello, M Aglietta & A Cignetti . Cytokine induced killer cells as adoptive immunotherapy strategy to augment graft versus tumor after hematopoietic cell transplantation. Expert Opin. Biol. Ther. (2009) 9(7):831-840

Product Use

For research and manufacturing use