

Datasheet for ABIN7566206

## IL-2 Protein (AA 21-153, Monomer) (Fc Tag)



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### Overview

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Quantity:                     | 50 µg                                      |
| Target:                       | IL-2 (IL2)                                 |
| Protein Characteristics:      | AA 21-153, Monomer                         |
| Origin:                       | Human                                      |
| Source:                       | HEK-293 Cells                              |
| Protein Type:                 | Recombinant                                |
| Biological Activity:          | Active                                     |
| Purification tag / Conjugate: | This IL-2 protein is labelled with Fc Tag. |

### Product Details

|                              |                                                                                                                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose:                     | IL-2 (human) (monomeric):Fc (LALA-PG)-KIH (human) (rec.)                                                                                                                                     |
| Cross-Reactivity:            | Human, Mouse                                                                                                                                                                                 |
| Characteristics:             | Human IL-2 (aa 21-153) is fused at the C-terminus to the Fc portion of human IgG1 (LALA-PG) (Knobs-into-Holes technology) (see reference: J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)). |
| Purity:                      | >95 % (SDS-PAGE)                                                                                                                                                                             |
| Endotoxin Level:             | <0.001EU/µg protein (LAL test).                                                                                                                                                              |
| Grade:                       | Animal-Free                                                                                                                                                                                  |
| Biological Activity Comment: | Increases proliferation of CTLL-2 mouse cytotoxic T cells with an ED50 of 2-5 pM (~0.17 to 0.42 ng/ml).                                                                                      |

## Target Details

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| Target:           | IL-2 (IL2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Alternative Name: | IL-2 ( <a href="#">IL2 Products</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Background:       | <p>InVivoKine™, IL-2 (human) (monomeric):Fc (LALA-PG) Knobs-into-Holes (human) (rec.), Interleukin-2, T Cell Growth Factor, TCGF, Aldesleukin, Super-2</p> <p>Interleukin-2 (IL-2) is a 133 amino acid glycoprotein with one intramolecular disulfide bond and variable glycosylation. It is secreted by activated T cells and induces proliferation and maturation of activated T cells, natural killer cells and lymphokine activated killer cells. IL-2 also stimulates proliferation of antibody-producing B cells, activates neutrophils and induces mononuclear cells to secrete IFN-gamma and TNF-alpha and -beta. Moreover, studies have shown that IL-2 is required for activation-induced apoptosis, an important homeostatic mechanism in the immune system, which is involved in the maintenance of peripheral tolerance to self-antigens. IL-2 promotes T cell proliferation and particularly naive T cells. IL-2 signaling on activated T cells is effected through a quaternary high-affinity receptor complex consisting of IL-2, IL-2Ralpha (CD25), IL-2Rbeta and IL-2Rgamma. Naive T cells are relatively insensitive to IL-2 as they only express small amounts of IL-2Rbeta and IL-2Rgamma. They only acquire sensitivity after CD25 expression, which captures the cytokine and presents it to the IL-2Rbeta and IL-2Rgamma receptors. IL-2 is used in the treatment of metastatic cancer cells. Recently synergy has been observed between IL-2 based therapy and checkpoint blockade for cancer treatments. Cells which bear receptors for IL-2 stimulation are modulated by checkpoint inhibition either directly or through other lymphocytes, and lymphocytes which are effectors of checkpoint inhibition may respond to IL-2. The protein IL-2 (human) (monomeric):Fc (LALA-PG)-KIH (human) (rec.) is produced by using two different vectors, one encoding for the IL-2 (human):Fc (LALA-PG) Knobs sequence (synthesizing a protein of 45 kDa) and one encoding for the Fc Holes sequence (synthesizing a protein of 28 kDa). Both vectors transfected into HEK293 cells produce both Fc molecules (Knobs-into-Holes technology, J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)) required for dimerization of the Fc moieties and for secretion of the final protein IL-2 (human) (monomeric):Fc (LALA-PG)-KIH (human) (rec.). The LALA-PG mutations inhibit binding to FcgammaRs and C1q while FcRn binding and Fc stability remain unaffected. InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research</p> |
| Molecular Weight: | ~48kDa and 28kDa (SDS-PAGE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| UniProt:          | <a href="#">P60568</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pathways:         | <a href="#">JAK-STAT Signaling</a> , <a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Production of Molecular Mediator of Immune Response</a> , <a href="#">Activated T</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Target Details

Cell Proliferation

## Application Details

Restrictions: For Research Use only

## Handling

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|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Format:          | Lyophilized                                                                                                                                                                                                                  |
| Reconstitution:  | After reconstitution: 1 mg/mL                                                                                                                                                                                                |
| Concentration:   | 1 mg/mL                                                                                                                                                                                                                      |
| Buffer:          | Contains PBS.                                                                                                                                                                                                                |
| Handling Advice: | After reconstitution, prepare aliquots and store at -20 °C. Avoid freeze/thaw cycles. Centrifuge lyophilized vial before opening and reconstitution. PBS containing at least 0.1 % BSA should be used for further dilutions. |
| Storage:         | 4 °C, -20 °C                                                                                                                                                                                                                 |
| Storage Comment: | Short Term Storage: +4°C<br>Long Term Storage: -20°C<br>Use & Stability: Stable for at least 6 months after receipt when stored at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C.               |