

Human IL-2, Tag Free Protein

HA210795



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| Product name: | Human IL-2, Tag Free |
| Species reactivity: | Human |
| Bio-Activity: | Measured in a cell proliferation assay using NK-92 human natural killer cells. The ED50 for this effect is 0.06-0.6 ng/mL. |
| Protein construction description: | A DNA sequence encoding the human IL-2 protein (P60568) (Ala 21-Thr 153) was expressed with tag free. |

Background: Cytokine produced by activated CD4-positive helper T-cells and to a lesser extend activated CD8-positive T-cells and natural killer (NK) cells that plays pivotal roles in the immune response and tolerance. Binds to a receptor complex composed of either the high-affinity trimeric IL-2R (IL2RA/CD25, IL2RB/CD122 and IL2RG/CD132) or the low-affinity dimeric IL-2R (IL2RB and IL2RG). Interaction with the receptor leads to oligomerization and conformation changes in the IL-2R subunits resulting in downstream signaling starting with phosphorylation of JAK1 and JAK3. In turn, JAK1 and JAK3 phosphorylate the receptor to form a docking site leading to the phosphorylation of several substrates including STAT5. This process leads to activation of several pathways including STAT, phosphoinositide-3-kinase/PI3K and mitogen-activated protein kinase/MAPK pathways. Functions as a T-cell growth factor and can increase NK-cell cytolytic activity as well. Promotes strong proliferation of activated B-cells and subsequently immunoglobulin production. Plays a pivotal role in regulating the adaptive immune system by controlling the survival and proliferation of regulatory T-cells, which are required for the maintenance of immune tolerance. Moreover, participates in the differentiation and homeostasis of effector T-cell subsets, including Th1, Th2, Th17 as well as memory CD8-positive T-cells.

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| Purity: | >95% as determined by SDS-PAGE. |
| Endotoxin: | Less than 1.0 EU per µg by the LAL method. |
| Fragment region: | IL-2 (21-153) |
| Source: | HEK293 |
| Accession: | P60568 |
| Predicted molecular mass: | 15.5 kD |
| Formulation: | Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol. |
| Reconstitution: | Reconstitute at 250 µg/ml in sterile water. |
| Storage: | Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles. |

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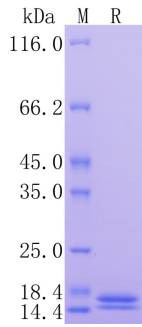


Fig1: Protein on SDS-PAGE under reducing (R) condition.

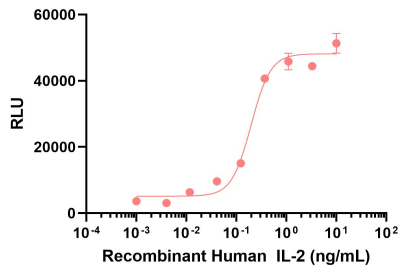


Fig2: Measured in a cell proliferation assay using NK-92 human natural killer cells. The ED_{50} for this effect is 0.06-0.6 ng/mL.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".