# IL2 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | IL2, Polyclonal Antibody |
| **Full Product Name** | Anti-IL2 Antibody (HRP), Rabbit Polyclonal |
| **Product Gene Name** | anti-IL2 antibody |
| **Product Synonym Names** | IL-2 Antibody (HRP), Rabbit PAb; interleukin 2; Anti-IL-2 Antibody; Anti-Interleukin-2 Antibody; Anti-lymphokine Antibody; Anti-TCGF Antibody |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Liquid; 0.2um filtered solution in PBS |
| **Purity/Purification** | Protein A |
| **Specificity** | Human IL-2 |
| **Preparation and Storage** | This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Protected from prolonged exposure to light. Preservative-Free. Avoid repeated freeze-thaw cycles. |
| **Molecular Weight** | 17,628 Da |
| **Chromosome Location** | Chromosome: 4; NC_000004.11 (123372625..123377650, complement). Location: 4q26-q27 |
| **OMIM** | 147680 |
| **3D Structure** | ModBase 3D Structure for P60568 |
| **Immunogen** | Recombinant Human IL-2 protein |
| **Conjugation** | HRP |
| **Preparation** | Produced in rabbits immunized with purified, recombinant Human IL-2 (rh IL-2). Total IgG was purified by Protein A affinity chromatography and conjugated with horseradish-peroxidase (HRP). |
| **Product Categories/Family for anti-IL2 antibody** | Neuroinflammation; Common G-Chain signaling pathway |
| **Applications Tested/Suitable for anti-IL2 antibody** | ELISA (EIA) |
| **Application Notes for anti-IL2 antibody** | ELISA: 0.1-1ug/ml |

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| **Related Product Information for anti-IL2 antibody** | Interleukin-2, also known as a T-cell growth factor, TCGF, Aldesleukin, and IL2, is a secreted protein that belongs to the IL-2 family. Interleukin-2/IL-2 was the first interleukin molecule to be discovered. Interleukin-2/IL-2 molecule was first purified to homogeneity by immunoaffinity chromatography by Kendall Smith and his team at Dartmouth Medical School. Interleukin-2/IL-2 was also the first cytokine shown to mediate its effects via a specific IL-2 receptor, and it was also the first interleukin to be cloned and expressed from a complementary DNA (cDNA) library. Interleukin-2/IL-2 was designated number 2 because Smith's data at the time indicated that IL-1, produced by macrophages, facilitates IL-2 production by T lymphocytes (T cells).<br>Interleukin-2/IL-2 is produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Interleukin-2/IL-2 is normally produced by the body during an immune response. When environmental substances (molecules or microbes) gain access to the body, these substances (termed antigens) are recognized as foreign by antigen receptors that are expressed on the surface of lymphocytes. Antigen binding to the T cell receptor (TCR) stimulates the secretion of Interleukin-2/IL-2 and the expression of IL-2 receptors IL-2R. The IL-2/IL-2R interaction then stimulates the growth, differentiation, and survival of antigen-selected cytotoxic T cells via the activation of the expression of specific genes. Interleukin-2/IL-2 can stimulate B-cells, monocytes, lymphokine-activated killer cells, natural killer cells, and glioma cells. The World Reference Standard for Interleukin-2/IL-2 is produced by the National Institute of Biological Standards and Control in the UK. A recombinant form of Interleukin-2/IL-2 for clinical use is manufactured by Chiron Corporation with the brand name Proleukin. It has been approved by the Food and Drug Administration (FDA) for the treatment of cancers (malignant melanoma, renal cell cancer), and is in clinical trials for the treatment of chronic viral infections, and as a booster (adjuvant) for vaccines. The use of Interleukin-2/IL-2 in HIV therapy is ineffective. |
| **Product References and Citations for anti-IL2 antibody** | Smith KA, et al., 1980, J. Exp. Med.151 (6): 1551-6. Smith KA, et al., 1980, Nature. 287 (5785): 853-5. Taniguchi T, et al., 1983, Nature. 302 (5906): 305. Cantrell DA, et al., 1984, Science. 224 (4655): 1312-6. Smith KA, et al., 1988, Science. 240 (4856): 1169-76. Wang X. et al., 2005, Science 310:1159-63. Stauber D.J. et al., 2006, Proc. Natl. Acad. Sci. USA. 103: 2788-93. |
| **Other Notes** | Small volumes of anti-IL2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for IL2 purchase** | MBS8105908 is an antibody targeting IL2. Also known as Anti-IL2 Antibody (HRP), Rabbit Polyclonal. Reactive in Human. Host: Rabbit. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL2. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 28178861 |
| **NCBI GeneID** | 3558 |
| **NCBI Accession #** | NP_000577.2 |
| **UniProt Primary Accession #** | P60568 |
| **UniProt Secondary Accession #** | P01585 |
| **UniProt Related Accession #** | P60568 |
| **GenBank Nucleotide #** | NM_000586.3 |
| **NCBI Official Full Name** | interleukin-2 |
| **NCBI Official Synonym Full Names** | interleukin 2 |
| **NCBI Official Symbol** | IL2 |
| **NCBI Official Synonym Symbols** | IL-2; TCGF; lymphokine |
| **UniProt Protein Name** | Interleukin-2 |
| **UniProt Synonym Protein Names** | T-cell growth factor |
| **Protein Family** | Interleukin |
| **UniProt Gene Name** | IL2 |
| **UniProt Synonym Gene Names** | IL-2; TCGF |

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| **UniProt Entry Name** | IL2_HUMAN |
| **NCBI Protein Information** | interleukin-2; aldesleukin; T cell growth factor; involved in regulation of T-cell clonal expansion |
| **NCBI Summary for IL2** | The protein encoded by this gene is a secreted cytokine that is important for the proliferation of T and B lymphocytes. The receptor of this cytokine is a heterotrimeric protein complex whose gamma chain is also shared by interleukin 4 (IL4) and interleukin 7 (IL7). The expression of this gene in mature thymocytes is monoallelic, which represents an unusual regulatory mode for controlling the precise expression of a single gene. The targeted disruption of a similar gene in mice leads to ulcerative colitis-like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for IL2** | IL2: Produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Can stimulate B-cells, monocytes, lymphokine- activated killer cells, natural killer cells, and glioma cells. A chromosomal aberration involving IL2 is found in a form of T-cell acute lymphoblastic leukemia (T-ALL). Translocation t(4;16)(q26;p13) with involves TNFRSF17. Belongs to the IL-2 family.<br><br>Protein type: Oncoprotein; Cytokine; Secreted; Secreted, signal peptide<br><br>Chromosomal Location of Human Ortholog: 4q26-q27<br><br>Cellular Component: extracellular space; extracellular region<br><br>Molecular Function: growth factor activity; interleukin-2 receptor binding; kinase activator activity; cytokine activity; glycosphingolipid binding; carbohydrate binding; kappa-type opioid receptor binding<br><br>Biological Process: positive regulation of isotype switching to IgG isotypes; negative regulation of heart contraction; natural killer cell activation; positive regulation of activated T cell proliferation; negative regulation of lymphocyte proliferation; elevation of cytosolic calcium ion concentration; cell-cell signaling; negative regulation of protein amino acid phosphorylation; protein kinase C activation; positive regulation of cell proliferation; positive regulation of B cell proliferation; cell adhesion; T cell differentiation; positive regulation of interleukin-17 production; regulation of T cell homeostatic proliferation; positive regulation of regulatory T cell differentiation; positive regulation of immunoglobulin secretion; positive regulation of cell growth; positive regulation of tissue remodeling; positive regulation of interferon-gamma production; positive regulation of tyrosine phosphorylation of Stat5 protein; negative regulation of inflammatory response; immune response; positive regulation of transcription from RNA polymerase II promoter; negative regulation of B cell apoptosis; positive regulation of inflammatory response; negative regulation of apoptosis |
| **Research Articles on IL2** | **1.** Intracellular expression and soluble production of interferon-(IFN)-gamma and interleukin-(IL)-2 as predictive biomarkers of acute rejection (AR) and personal drug response. |
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