Il-2 (IL2) Active Protein

PRODUCT OVERVIEW

Product Name	IL-2 (IL2), Active Protein
Full Product Name	RECOMBINANT HUMAN INTERLEUKIN-2
Product Gene Name	IL2 active protein
Form/Format	Purified protein produced in E Coli - lyophilised
Purity/Purification	>98% by SDS PAGE and HPLC analysis
Concentration	Total protein concentration 0.1mg/ml after reconstitution. (lot specific)
Preparation and Storage	Prior to reconstitution store at 4 degree C. Following reconstitution store at -20 degree C. This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use. Shelf Life: 3 months from date of reconstitution.
Molecular Weight	Protein Molecular Weight: 15.5kDa (134 Amino acid sequence)
OMIM	147680
3D Structure	ModBase 3D Structure for P60568
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Reconstitution	Reconstitute with 0.1ml 0.1M acetic acid Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. MyBioSource recommends that the vial is gently mixed after reconstitution.
Buffer Solution	10mM Sodium citrate.
Activity	>1 x 107 units/mg as determined by dose-dependent stimulation of CTLL-2 cells.
Target Species	Human
Applications Tested/Suitable for IL2 active protein	ELISA (EIA), Functional Assays (FN), Western Blot (WB)
Application Notes for IL2 active protein	**ELISA:** Minimum Dilution: 0.2; Maximum Dilution: 0.4ng/well; **Functional Assays:** Minimum Dilution: 0.1; Maximum Dilution: 2.0ng/ml; **Western Blotting:** Minimum Dilution: 1.5; Maximum Dilution: 3.0ng/lane
Related Product Information for IL2 active protein	Recombinant human interleukin 2 is an Escherichia coli-derived recombinant protein corresponding to full-length mature human interleukin-2, a secreted peptide required for T-cell proliferation. This preparation has an ED50 of 0.1ng/ml as determined by the dose-dependent stimulation of the proliferation of murine CTLL-2 cells.
Other Notes	Small volumes of IL2 active protein 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	MBS232243 is an active protein targeting IL2. Also known as RECOMBINANT HUMAN INTERLEUKIN-2.

ADDITIONAL DETAILS

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

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; TCGF; INN: Aldesleukin
Protein Family	Interleukin
UniProt Gene Name	IL2
UniProt Synonym Gene Names	IL-2; TCGF
UniProt Entry Name	IL2_HUMAN
NCBI Protein Information	interleukin-2; T cell growth factor; aldesleukin; 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. Protein type: Cytokine; Secreted, signal peptide; Secreted; Oncoprotein Chromosomal Location of Human Ortholog: 4q26-q27 Cellular Component: extracellular space; extracellular region Molecular Function: growth factor activity; interleukin-2 receptor binding; kinase activator activity; cytokine activity; carbohydrate binding; glycosphingolipid binding; kappa-type opioid receptor binding 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; negative regulation of protein amino acid phosphorylation; cell-cell signaling; positive regulation of cell proliferation; protein kinase C activation; 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 interferon-gamma production; positive regulation of tissue remodeling; 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.** Genetic variation in interleukin-2 gene is associated with breast cancer risk.

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