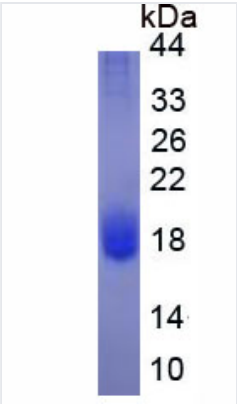
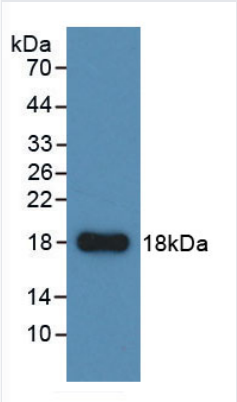
Interleukin 4 (IL4) Active Protein

PRODUCT OVERVIEW

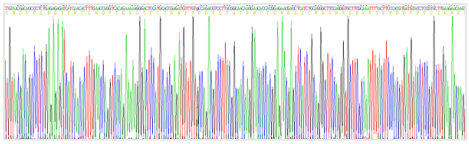
Product Name	Interleukin 4 (IL4), Active Protein
Full Product Name	Active Interleukin 4 (IL4)
Product Gene Name	IL4 active protein
Product Synonym Names	BSF1; BCGF1 ; B Cell Stimulatory Factor 1; Lymphocyte stimulatory factor 1; B Cell Growth Factor; Binetrakin; Pitrakinra
Form/Format	Freeze-dried powder PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Purity/Purification	>90%
Preparation and Storage	Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Avoid repeated freeze/thaw cycles. Stability: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Molecular Weight	Predicted Molecular Mass: 15.4kDa Accurate Molecular Mass: 18kDa
Sequence Positions	Cys25~Ser147
3D Structure	ModBase 3D Structure for P20096
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
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.
Species	Rat
Tag	N-terminal His Tag
Isoelectric Point	9.1
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Product Categories/Family for IL4 active protein	Cytokine; Immune molecule
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for IL4 active protein	Cell Culture, Activity Assays
Related Product Information for IL4 active protein	MBS2122271 is an active protein targeting IL4. Also known as Active Interleukin 4 (IL4).
Other Notes	Small volumes of IL4 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.



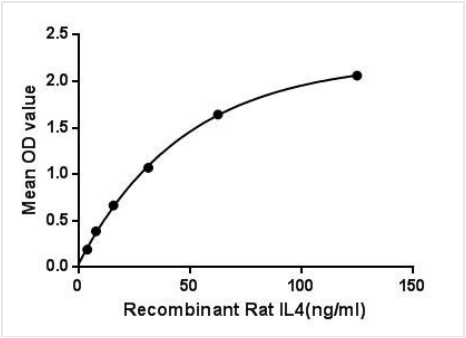
SDS-Page of IL4 active protein
Figure. SDS-PAGE



Western Blot (WB) of IL4 active protein
Figure. Western Blot



Gene Sequencing of IL4 active protein
Figure. Gene Sequencing (Extract)



Biological Activity Testing of IL4 active protein
Figure. The binding activity of IL4 with IL4R.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL4. It may not necessarily be applicable to this product.

NCBI GI #	42627877
NCBI GeneID	287287
NCBI Accession #	NP_958427.1
UniProt Primary Accession #	P20096
UniProt Related Accession #	P20096
GenBank Nucleotide #	NP_958427.1
NCBI Official Full Name	interleukin-4
NCBI Official Synonym Full Names	interleukin 4
NCBI Official Symbol	Il4
NCBI Official Synonym Symbols	Il4e12
UniProt Protein Name	Interleukin-4
UniProt Synonym Protein Names	B-cell IGG differentiation factor; B-cell growth factor 1; B-cell stimulatory factor 1; BSF-1; Lymphocyte stimulatory factor 1
Protein Family	Interleukin
UniProt Gene Name	Il4
UniProt Synonym Gene Names	Il-4; IL-4; BSF-1
UniProt Entry Name	IL4_RAT

NCBI Protein Information	interleukin-4
NCBI Summary for IL4	Th2-type cytokine; may be involved in inflammatory response in eosinophils [RGD, Feb 2006]
UniProt Comments for IL4	IL4: Participates in at least several B-cell activation processes as well as of other cell types. It is a costimulator of DNA-synthesis. It induces the expression of class II MHC molecules on resting B-cells. It enhances both secretion and cell surface expression of IgE and IgG1. It also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Genetic variations in IL4 may be a cause of susceptibility to ischemic stroke (ISCHSTR); also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors. Belongs to the IL-4/IL-13 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted, signal peptide; Cell cycle regulation; Motility/polarity/chemotaxis; Secreted; Cytokine Cellular Component: extracellular space; external side of plasma membrane Molecular Function: growth factor activity; cytokine activity; interleukin-4 receptor binding Biological Process: positive regulation of isotype switching to IgG isotypes; negative regulation of osteoclast differentiation; positive regulation of transcription, DNA-dependent; microglial cell activation; regulation of proton transport; female pregnancy; positive regulation of activated T cell proliferation; response to organic cyclic substance; positive regulation of isotype switching to IgE isotypes; positive regulation of interleukin-10 production; B cell costimulation; positive regulation of MHC class II biosynthetic process; positive regulation of cell proliferation; positive regulation of B cell proliferation; positive regulation of T cell proliferation; positive regulation of interleukin-13 production; negative regulation of macrophage activation; response to nutrient; response to drug; cholesterol metabolic process; negative regulation of chronic inflammatory response; regulation of immune response; B cell activation; negative regulation of nitric oxide biosynthetic process; negative regulation of acute inflammatory response; positive regulation of mast cell degranulation; defense response to protozoan; positive regulation of immunoglobulin production; T-helper 1 cell lineage commitment; positive regulation of peptidyl-tyrosine phosphorylation; positive regulation of chemokine biosynthetic process; response to ethanol; innate immune response in mucosa; positive regulation of T cell differentiation; positive regulation of tyrosine phosphorylation of Stat5 protein; retina development in camera-type eye; positive regulation of B cell activation; response to cytokine stimulus; regulation of inflammatory response; positive regulation of transcription factor activity; positive regulation of transcription from RNA polymerase II promoter; positive regulation of protein amino acid phosphorylation; T-helper 2 cell differentiation; positive regulation of defense response to virus by host; negative regulation of transcription, DNA-dependent; negative regulation of T cell activation; regulation of T cell activation
Research Articles on IL4	**1.** Shashen-Maidong decoction can improve the immune function of RP rats by increasing IFN-gamma concentration and decreasing IL-4 concentration, possibly by increasing the relative ratio of IFN-gamma/IL-4 to regulate the immune imbalance of Th1/Th2.
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