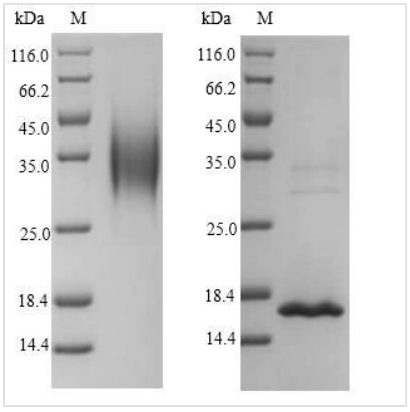
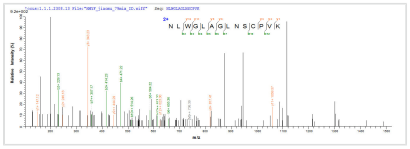
Recombinant Macaca fascicularis Interleukin-4 (IL4)

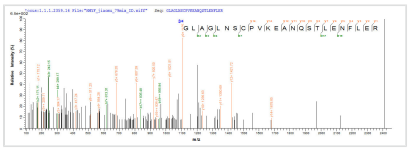
Product Code	CSB-YP301281MOV
Relevance	Participates in at least several B-cell activation processes as well as of other cell types. It is a costimulator of DNA-synthesis. It induces the expression of class II MHC molecules on resting B-cells. It enhances both secretion and cell surface expression of IgE and IgG1. It also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Positively regulates IL31RA expression in macrophages.
Abbreviation	Recombinant Cynomolgus monkey IL4 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P79339
Product Type	Recombinant Proteins
Immunogen Species	Macaca fascicularis (Crab-eating macaque) (Cynomolgus monkey)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	HKCDITLQEIIKTLNSLTEQKTLCTKLTITDILAASKNTTEKETFCRAATVLRQFYS HHEKDTRCLGATAQQFHRHKQLIRFLKRLDRNLWGLAGLNSCPVKEANQSTL ENFLERLKTIMREKYSKCSS
Research Area	Immunology
Source	Yeast
Target Names	IL4
Protein Names	Recommended name: Interleukin-4 Short name= IL-4Alternative name(s): B-cell stimulatory factor 1 Short name= BSF-1 Lymphocyte stimulatory factor 1
Expression Region	25-153aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	16.9kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.
Left. 35 kDa.
Right. 16.9 kDa by EndoH digestion
The reducing (R) protein migrates as 35 kDa in SDS-PAGE due to glycosylation.



Based on the SEQUEST from database of Yeast host and target protein, the LC-MS/MS Analysis result of CSB-YP301281MOV could indicate that this peptide derived from Yeast-expressed Macaca fascicularis (Crab-eating macaque) (Cynomolgus monkey) IL4.



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Description

The expression of recombinant Macaca fascicularis IL4 protein includes the construction of the expression vector containing the recombinant DNA and the transformation of the expression vector into the yeast, which provides a variety of macromolecules and components required for transcription and translation. The recombinant DNA was formed by fusing the N-terminal 6xHis tag sequence to the designated sequence encoding the 25-153aa of the Macaca fascicularis IL4 protein. This N-terminal 6xHis-tagged recombinant Macaca fascicularis IL4 protein is also characterized by high purity, >90%. Under SDS-PAGE condition, this recombinant IL4 protein migrated to the bands of about 30 kDa and 17 kDa molecular weight, corresponding to the glycosylated and deglycosylated forms, respectively.

As the B cell-stimulatory factor-1, IL-4 is mainly produced by activated T cells. In T-cells, IL-4 induces the differentiation of naïve CD4 T cells into Th2 cells, in B cells, IL-4 drives the immunoglobulin (Ig) class switch to IgG1 and IgE, and in macrophages, IL-4 and IL-13 induce alternative macrophage activation. It has been well-documented that it plays a major role in hormone control and adaptive immunity. In addition, IL-4 a key regulator in inflammation response and wound repair. Many papers give insights into the functional formation of IL-4. Studies found that IL-4 coordinates the Th2-type immune response in inflammatory diseases such as asthma. IL-27 can inhibit the development of both Th2 and Th1. Prolonged residence of an albumin–IL-4-fusion protein in secondary lymphoid organs ameliorates experimental autoimmune encephalomyelitis. IL-4 absence could trigger the distinct pathways in apical periodontitis development.

	Association between IL-4 gene polymorphisms and IL-4 serum levels in patients with allergic rhinitis. Status of IL?4 and IL?10 driven markers in experimental models of visceral leishmaniasis.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.