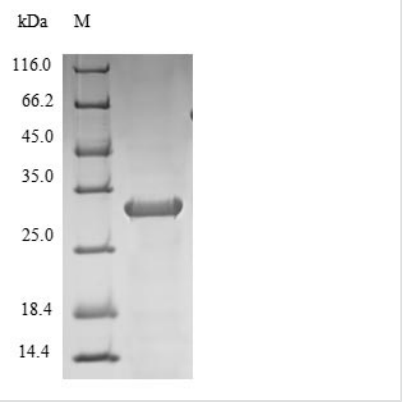
Recombinant Macaca mulatta Interleukin-10 (IL10)

Product Code	CSB-EP011580MOW
Relevance	Inhibits the synthesis of a number of cytokines, including IFN-gamma, IL-2, IL-3, TNF and GM-CSF produced by activated macrophages and by helper T-cells.
Abbreviation	Recombinant Rhesus macaque IL10 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.	P51496
Alias	Cytokine synthesis inhibitory factor
Product Type	Recombinant Protein
Immunogen Species	Macaca mulatta (Rhesus macaque)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SPGQGTQSENSCTRFPGNLPHMLRDLRDAFSRVKTFFQMKDQLDNILLKESLL EDFKGYLGCQALSEMIQFYLEEVMPQAENHDPDIKEHVNSLGENLKTLRLRLR RCHRFLPCENKSKAVEQVKNAFSKLQEKGVYKAMSEFDIFINYIEAYMTMKIQN
Research Area	Immunology
Source	E.coli
Target Names	IL10
Protein Names	Recommended name: Interleukin-10 Short name= IL-10 Alternative name(s): Cytokine synthesis inhibitory factor Short name= CSIF
Expression Region	19-178aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-B2M-tagged
Mol. Weight	32.7kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Macaca mulatta Interleukin-10 (IL10) is expressed in E. coli and comprises the full length of the mature protein, covering the amino acid region 19-178. The protein features an N-terminal 6xHis-B2M tag to facilitate purification and detection. It achieves a purity level greater than 90% as determined by SDS-PAGE, ensuring a high-quality product suitable for research applications. This product is intended for research use only.

Interleukin-10 (IL10) appears to be a cytokine with a crucial role in controlling immune responses. It's known for its anti-inflammatory properties, helping to rein in immune reactions and prevent damage to the host during infections. IL10 is involved in various signaling pathways and can influence how immune cells like macrophages and T cells function. Its importance in immunological research makes it a valuable tool for studying immune modulation.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation Studies

This recombinant Macaca mulatta IL-10 protein can serve as an immunogen for generating species-specific antibodies against rhesus macaque IL-10. The N-terminal 6xHis-B2M tag makes purification and immobilization easier for antibody screening assays. The >90% purity level should be sufficient for immunization protocols and subsequent antibody characterization experiments. These antibodies would likely become valuable research tools for studying IL-10 expression and localization in rhesus macaque tissues and cell cultures.

2. Cross-Species Protein Interaction Studies

Researchers can use the recombinant protein to investigate protein-protein interactions between rhesus macaque IL-10 and its potential binding partners, including receptors and other signaling molecules. The His-tag allows for pull-down assays and affinity chromatography experiments to identify and

characterize binding partners from rhesus macaque cell lysates or tissue extracts. Such studies may provide insights into the molecular mechanisms of IL-10 signaling pathways in non-human primate models.

3. Biochemical Characterization and Stability Studies

This purified recombinant protein works well for comprehensive biochemical analysis including protein folding studies, thermal stability assessments, and pH tolerance experiments. The defined expression region (19-178aa) representing the mature protein allows for accurate molecular weight determination and structural integrity analysis using techniques such as dynamic light scattering and circular dichroism spectroscopy. These characterization studies appear essential for understanding the biophysical properties of rhesus macaque IL-10.

4. Comparative Evolutionary and Sequence Analysis

The recombinant Macaca mulatta IL-10 protein can serve as a reference standard for comparative studies with IL-10 proteins from other primate species or human IL-10. Mass spectrometry-based peptide mapping and amino acid sequencing can be performed to validate the expressed protein sequence and identify any species-specific modifications. Comparative analyses like these contribute to understanding the evolutionary conservation and divergence of IL-10 across primate species.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
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.