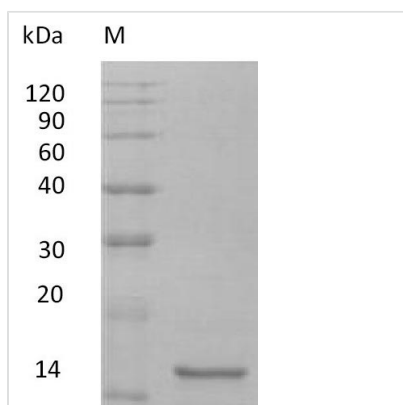




Recombinant Mouse Interleukin-10 (IL10) (Active)

Product Code	CSB-AP004841MO
Abbreviation	Recombinant Mouse IL10 protein (Active)
Uniprot No.	P18893
Storage Buffer	Lyophilized from a 0.2 µm filtered 4mM HCl.
Product Type	Interleukins
Immunogen Species	Mus musculus (Mouse)
Biological Activity	The ED50 as determined in a cell proliferation assay using FDC-P1 Mouse bone marrow cells is 6 ng/ml.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	SRGQYSREDNNCTHFPVGQSHMLLELRTAFSQVKTFQTKDQLDNILLTDSL MQDFKGYLGCGALSEMIQFYLVVEVMPQAEKHGPEIKEHLNSLGEKLTLMRLR RCHRFLPCENKSKAVEQVKSDFNKLQDQGVYKAMNEFDIFINCIEAYMMIKMK S
Research Area	Immunology
Source	E.coli
Target Names	IL10
Expression Region	19-178aa
Tag Info	Tag-Free
Mol. Weight	18.9 kDa
Protein Length	Full Length of Mature Protein

Image



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

Description

The recombinant mouse IL10 protein was produced using an E. coli system. The gene fragment coding for the 19-178aa of mouse IL10 is inserted into a plasmid and then transfected into E.coli for expression. The resulting product is subject to affinity chromatography purification. Its purity exceeds 95% as measured by SDS-PAGE and its endotoxin content is below 0.01 EU/µg as



determined by the LAL method. This recombinant mouse IL10 protein has also been validated to be an active protein, with the ED₅₀ of 6 ng/ml as determined in a cell proliferation assay using FDC-P1 Mouse bone marrow cells.

Mouse IL10 is a crucial anti-inflammatory cytokine that plays a significant role in regulating immune responses in mice. It is primarily produced by various immune cells, including B cells, T cells, and macrophages. IL10 is known for its ability to inhibit pro-inflammatory cytokine production, thus maintaining immune homeostasis and preventing excessive tissue damage during inflammatory responses [1][2][3].

In cancer research, IL10 has been shown to enhance tumor immunity by promoting T-cell responses and inhibiting tumor metastasis [1]. It is also implicated in regulating B cell functions, supporting the development of regulatory B cells that produce IL10 in response to specific stimuli, thereby contributing to the suppression of autoimmune responses and maintaining tolerance [4][5]. IL10's ability to limit inflammatory responses is essential in preventing tissue damage during autoimmune attacks. In models of autoimmune diseases, IL10 has been shown to regulate the balance between pro-inflammatory and anti-inflammatory signals, thereby influencing disease progression [2][4].

References:

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<https://doi.org/10.3389/fonc.2021.655554>
- [2] M. Horikawa, V. Minard-Colin, T. Matsushita, & T. Tedder, Regulatory b cell production of il-10 inhibits lymphoma depletion during cd20 immunotherapy in mice, *Journal of Clinical Investigation*, vol. 121, no. 11, p. 4268-4280, 2011.
<https://doi.org/10.1172/jci59266>
- [3] H. Bouabe, Y. Liu, M. Moser, M. Bösl, & J. Heesemann, Novel highly sensitive il-10- β -lactamase reporter mouse reveals cells of the innate immune system as a substantial source of il-10 in vivo, *The Journal of Immunology*, vol. 187, no. 6, p. 3165-3176, 2011. <https://doi.org/10.4049/jimmunol.1101477>
- [4] K. Yanaba, J. Bouaziz, T. Matsushita, T. Tsubata, & T. Tedder, The development and function of regulatory b cells expressing il-10 (b10 cells) requires antigen receptor diversity and tlr signals, *The Journal of Immunology*, vol. 182, no. 12, p. 7459-7472, 2009. <https://doi.org/10.4049/jimmunol.0900270>
- [5] Y. Iwata, T. Matsushita, M. Horikawa, D. DiLillo, K. Yanaba, G. Venturi et al., Characterization of a rare il-10-competent b-cell subset in humans that parallels mouse regulatory b10 cells, *Blood*, vol. 117, no. 2, p. 530-541, 2011.
<https://doi.org/10.1182/blood-2010-07-294249>

Endotoxin

Less than 0.01 EU/ μ g as determined by LAL method.

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.