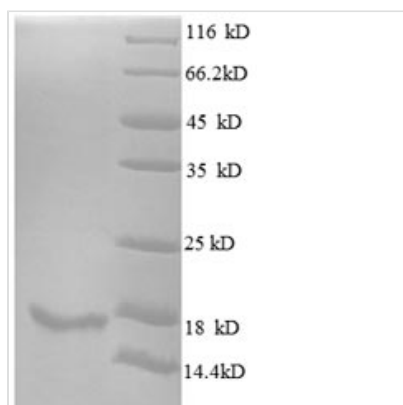




Recombinant Human Interleukin-15 (IL15)

Product Code	CSB-EP011593HU
Relevance	Cytokine that stimulates the proliferation of T-lymphocytes. Stimulation by IL-15 requires interaction of IL-15 with components of IL-2R, including IL-2R beta and probably IL-2R gamma but not IL-2R alpha.
Abbreviation	Recombinant Human IL15 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.	P40933
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	NWVNVISDLKKIEDLIQSMHIDATLYTESDVHPSCCKVTAMKCFLLLELQVISLESG DASIHDTVENLIILANNSLSSNGNVTESGCKECEELEEKNIKEFLQSFVHIVQMFI NTS
Research Area	Metabolism
Source	E.coli
Target Names	IL15
Expression Region	49-162aa
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	16.8kDa
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 human IL15 protein labeled with a 6xHis tag at the N-terminus is produced in an E. coli expression system. The IL15 gene fragment (49-162aa) is first co-cloned into a high-efficiency vector with the 6xHis tag gene, followed by transformation into E. coli. Protein expression is induced with IPTG, and the recombinant IL15 protein is subsequently harvested through bacterial cell lysis. Ni-NTA affinity chromatography is employed to purify the IL15 protein by taking advantage of the 6xHis tag's affinity for nickel ions. SDS-PAGE analysis is performed to verify the purity of the protein, revealing a purity level greater than 90%.

Human IL15 is a crucial cytokine that plays a significant role in the immune system, particularly in the development and maintenance of T cells and NK cells. It is primarily secreted by macrophages and other immune cells, and it is essential for the survival and proliferation of memory T cells, which are vital for long-term immunity [1][2]. IL15 operates through a complex receptor system, primarily involving the IL15R α , which enhances the stability and bioactivity of IL15 [3][4]. This receptor is critical for the trans-presentation of IL15 to other immune cells, facilitating their activation and proliferation [5].

IL15 is chemotactic for NK cells, promoting their migration and recruitment to sites of infection or inflammation [6][7]. IL15 is involved in the recruitment of CD16⁺ NK cells into the endometrium, highlighting its role in reproductive immunology [7]. Additionally, IL15 has been implicated in various pathological conditions, including autoimmune diseases and cancer, where it can enhance the cytotoxic activity of T cells against tumors [8][9][10]. Dysregulation of IL15 has been associated with several conditions, including obesity and coronary artery disease, where altered levels of IL15 and its receptor have been observed [3][11].

References:

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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.