



Human Interleukin 15 (IL-15) Protein, Recombinant

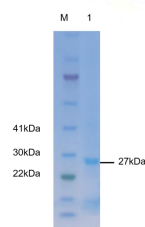
I. For sale

Product name	Catalog #	Size
Human Interleukin 15 (IL-15) Protein, Recombinant	P0110357	10ug
		50ug
		500ug
		1mg

II. Product Description

Other Names	Interleukin-15
Protein & NCBI Number	P40933, U14407
Host	E.coli
Express Region	Ala29-Ser162
Protein Sequence	MGSSHMASMSDSEVNQEAKPEVKPEVKPETHINLKVSDGSSEIFFKIKKTTPLRRLMEAFARQ GKEMDSLRFLYDGIRIQADQTPEDLDMEDNDIIEAHREQIGGAGIHVFILGCF SAGLPKTEANWVNVISDLKKIEDLIQSMHIDATLYTESDVHPSCKVTAMKCFLELQVISLES GDASIHDTVENLIILANNSLSSNGNVTESGCKECEEELEEKNIKEFLQSFVHIVQMFINTSKHHHHHH
Molecular Weight	The protein consists of 247 amino acids (including the fusion tag), with a predicted molecular weight of 27.77 kDa
Fusion Tag	SUMO(N-terminus), 6 × His (C-terminus)
Purity	≥95% SDS-PAGE
Physical Property	Liquid
Components	0.01M PBS+20% glycerol, sterile solution.
Storage & Stability	After aliquoting, the stability of the samples can be maintained for up to 6 months at -20°C to -80°C, avoiding repeated freeze-thaw cycles.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products

Figure. SDS-PAGE



Bis-Tris (MOPS) SDS-PAGE



III. Storage and Transportation

Transport at 2-8°C, product is stable for up to twelve months from date of receipt under sterile conditions at -20°C to -80°C.

IV. Notes

This product is for research use only. Please wear laboratory attire and disposable gloves when handling.

V. Background

Interleukin-15 (IL-15) is a T-cell growth factor discovered in 1994 by two independent laboratories and shares similar biological functions with IL-2. IL-15 is a pleiotropic cytokine primarily secreted by monocytes and macrophages, and its mRNA is expressed in a variety of cells and tissues in the human body, such as the heart, lungs, kidneys, muscle, and placenta. Nevertheless, IL-15 expression is most abundant in adherent peripheral blood monocytes, fibroblasts, and epithelial cells.

The IL-15 gene is located on human chromosome 4q31 and consists of 9 exons and 8 introns. Four of these exons (from the 5th to the 8th exon) encode the mature protein, which has a molecular weight of approximately 14-15 kDa. The cell sources and target cell distribution of IL-15 are broader than those of IL-2, suggesting that it may exert effects similar to IL-2 in tissues where IL-2 is not expressed.

IL-15 (Interleukin-15) and IL-2 (Interleukin-2) are both crucial cytokines that play multifaceted roles in the immune system. IL-15 and IL-2 share similar functions in regulating the proliferation, development, and survival of T cells and NK cells. However, their roles in B cell immunoglobulin production differ. IL-2 primarily affects T cells, whereas IL-15 has a more pronounced impact on NK cells.

VI. References

1. IL-15 functions as a danger signal to regulate tissue-resident T cells and tissue destruction. Jabri, B., Abadie, V. *Nat Rev Immunol* 15, 771–783 (2015).
2. The role of interleukin-15 in inflammation and immune responses to infection: implications for its therapeutic use. Perera PY, Lichy JH, Waldmann TA, Perera LP. *Microbes Infect.* 2012 Mar.
3. The biology of interleukin-2 and interleukin-15: implications for cancer therapy and vaccine design. Waldmann, T. *Nat Rev Immunol* 6, 595–601 (2006).
4. Discovery of a novel IL-15 based protein with improved developability and efficacy for cancer immunotherapy. Hu, Q., Ye, X., Qu, X. et al. *Sci Rep* 8, 7675 (2018).