

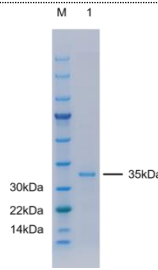


Human Interleukin 11 (IL-11) Protein, Recombinant

I. For sale

Product name	Catalog #	Size
Human Interleukin 11 (IL-11) Protein, Recombinant	P0110352	10ug
		50ug
		500ug
		1mg

II. Product Description

Other Names	AGIF; IL-11
Protein & NCBI Number	P20809, M57765
Host	E.coli
Express Region	Pro22-Leu199
Protein Sequence	MGSSHMASMSDSEVNQEAKPEVKPEVKPETHINLKVSDGSSEIFFKIKKTTPLRRLMEAFARQGGKEMDSLRFYDGIQADQTPEDLDMEDNDIIEAHREQIGGPGPPPGRVSPDPRAELDSTVLLTRSLADTRQLAAQLRDKFPADGDHNLDSLPTLAMSAGALGALQLPGLVLRRLADLLSYLRHVQWLRAGGSSSLKLEPELGTQARLDRLRLQLLMSRLALPQPPDPAPPLAPPSSAWGGIRAAHAILGGLHLTDWAVRGLLLKTRLKHHHHHH
Molecular Weight	The protein molecule consists of 291 amino acids (including the fusion tag), with a predicted molecular weight of 32.13kDa and an actual molecular weight of 35kDa.
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	 <p>Bis-Tris (MOPS) SDS-PAGE</p>



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-11 (IL-11) is a growth factor that stimulates the proliferation and differentiation of hematopoietic stem cells, leading to the production of multiple blood cell lineages, including erythrocytes, granulocytes, and platelets. IL-11 is pro-inflammatory and can induce the production of other cytokines (such as IL-6, IL-8, and GM-CSF), which recruit immune cells to the site of inflammation. IL-11 enhances the activity of immune cells (including T cells, B cells, and macrophages) and promotes the production of antibodies.

IL-11 inhibits the activity of osteoclasts, which are responsible for bone resorption, and promotes the differentiation of osteoblasts, which are responsible for bone formation. IL-11 facilitates the differentiation of pre-adipocytes into mature adipocytes, which may contribute to obesity and insulin resistance. IL-11 has been implicated in the progression of various cancers, including multiple myeloma, Hodgkin's lymphoma, and breast cancer, by promoting the growth, survival, and angiogenesis of tumor cells. IL-11 may also promote the development of fibrotic diseases, such as pulmonary fibrosis and liver fibrosis, by enhancing the activation of fibroblasts and the deposition of extracellular matrix.

IL-11 has shown neuroprotective effects in certain contexts, including ischemic stroke and neurodegenerative diseases, by diminishing inflammation and enhancing neuronal survival.

IL-11 is involved in the regulation of reproductive processes, including implantation, placental formation, and parturition.

VI. References

1. g, B., Cook, S.A. & Schafer, S. Interleukin-11 signaling underlies fibrosis, parenchymal dysfunction, and chronic inflammation of the airway. *Exp Mol Med* 52, 1871–1878 (2020).
2. Schafer, S., Viswanathan, S., Widjaja, A. et al. IL-11 is a crucial determinant of cardiovascular fibrosis. *Nature* 552, 110–115 (2017).
3. Nishina, T., Deguchi, Y., Ohshima, D. et al. Interleukin-11-expressing fibroblasts have a unique gene signature correlated with poor prognosis of colorectal cancer. *Nat Commun* 12, 2281 (2021).