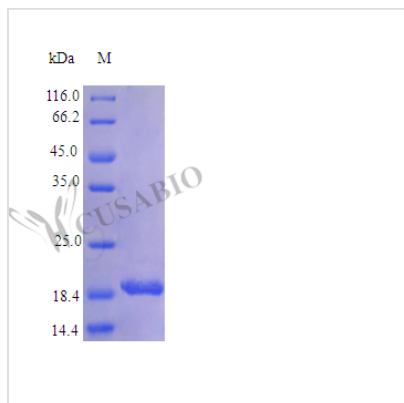




Recombinant Human Interleukin-11 protein (IL11) (Active)

Product Code	CSB-AP001801HU
Abbreviation	Recombinant Human IL11 protein (Active)
Uniprot No.	P20809
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 µm filtered PBS, pH 7.4
Product Type	Interleukin
Immunogen Species	Homo sapiens (Human)
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine B9-11 cells is less than 1 ng/ml, corresponding to a specific activity of >1.0x10 ⁶ IU/mg.
Purity	>95% as determined by SDS-PAGE.
Sequence	M+PGPPPGPPR VSPDPRAELD STVLLTRSL ADTRQLAAQL RDKFPADGDH NLDSLPTLAM SAGALGALQL PGVLTRLRAD LLSYLRHVQW LRRAGGSSLK TLEPELGTQL ARLDRLLRRL QLLMSRLALP QPPDPAPP LAPPSSAWGG IRAAHAILGG LHLTLDWAVR GLLLLKTRL
Research Area	Immunology
Source	E.coli
Target Names	IL11
Expression Region	22-199aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag-Free
Mol. Weight	19.1 kDa
Protein Length	Full Length of Mature Protein
PubMed ID	2145578; 1828438; 1386338; 14702039; 15057824; 15489334; 12919066; 25195742

Image



Description

The gene fragment encoding the 22-199aa of human IL11 is cloned into a vector and then transfected into the E.coli for expression. The resulting product is the recombinant human IL11 protein. It has been validated to be biologically active by a cell proliferation assay using murine B9-11 cells, with an ED₅₀ of ? 1 ng/ml, corresponding to a specific activity of >1.0x10⁶ IU/mg. Its purity is greater than 95% as measured by SDS-PAGE. Its endotoxin level is less than 1.0 EU/μg as determined by the LAL method.

Human IL11 is primarily produced by a variety of cell types, including fibroblasts, macrophages, and endothelial cells, and it exerts its biological effects through the gp130 receptor signaling pathway, which it shares with other cytokines in the same family, such as IL6 and leukemia inhibitory factor (LIF) [1][2].

IL11 is known for its anti-inflammatory properties and its ability to promote the proliferation and differentiation of hematopoietic progenitor cells, particularly megakaryocytes, which are essential for platelet production [3][4]. Beyond hematopoiesis, IL11 is implicated in various pathological conditions, including cancer. Studies have shown that IL11 can enhance the invasive properties of certain cancer cells, such as those found in gastric and colorectal carcinomas, suggesting its involvement in tumor progression and metastasis [5][6]. IL11 can also modulate the activity of immune cells, influencing their proliferation and differentiation, which has implications for autoimmune diseases and inflammatory conditions [7][8].

References:

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Endotoxin	Less than 1.0 EU/ μ g as determined by LAL method.
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.