



SHANGHAI GENOMICS

Recombinant Human Interleukin 11

rHuIL-11

Catalog number: SG3110-31

Specifications and Use

- Source** ● *Escherichia coli*.
- Molecular Mass** ● Approximately 19kDa, but migrates in SDS-PAGE with an apparent molecular mass of 23kDa.
- Purity** ● $\geq 97\%$, as determined by SDS-PAGE and HPLC method.
- Biological Activity** ● Measured in a cell proliferation assay using B₉-11, the specific activity shall be not less than 8×10^6 U/mg.
- Endotoxin Level** ● ≤ 1 EU/ μ g, determined by the LAL method.
- Formulation** ● Lyophilized from a 0.2 μ m filtered solution in 10mM Phosphate Buffer.
- Solubility** ● It is recommended to reconstitute the lyophilized rHuIL-11 in sterile ddH₂O containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 10 μ g/ml of the cytokine.
- Stability** ● Lyophilized samples are stable for greater than six months from date of receipt at -20°C to -70°C.
● Upon reconstitution, this cytokine can be stored under sterile conditions at 2-8°C for one month or at -20°C to -70°C in a manual defrost freezer for three months without detectable loss of activity.
● Avoid repeated freeze-thaw cycles.
- Usage** FOR RESEARCH USE ONLY. NOT FOR HUMAN USE.

Human Interleukin 11

Interleukin eleven (IL-11) is a thrombopoietic growth factor that directly stimulates the proliferation of hematopoietic stem cells and megakaryocyte maturation resulting in increased platelet production. IL-11 is a member of a family of human growth factors, which includes human growth hormone, granulocyte colony-stimulating factor (G-CSF), and other growth factors.

Recombination human interleukin 11 is produced in E.coli by recombinant DNA technology. The protein has a molecular mass of approximately 19,000 daltons, and is non-glycosylated. The polypeptide is 177 amino acids in length and differs from the 178 amino acid length of native IL-11 only in lacking the amino-terminal proline residue. This alteration has not resulted in measurable differences in bioactivity either in vitro or in vivo. IL-11 is produced by bone marrow stromal cells and is part of the cytokine family that shares the gp130. Both bone-forming and bone-resorbing cells are potential targets of IL-11.

IL-11 has also been shown to have non-hematopoietic activities in animals including the regulation of intestinal epithelium growth (enhanced healing of gastrointestinal lesions), the inhibition of adipogenesis, the induction of acute phase protein synthesis, inhibition of pro-inflammatory cytokine production by macrophages, and the stimulation of osteoclastogenesis and neurogenesis.