

PRODUCT DESCRIPTION

Interleukin 11 (IL-11) is a pleiotropic cytokine that exerts its effects on myelopoiesis and lymphopoiesis. It can stimulate the T cell-dependent development of specific immunoglobulin-secreting B cells. IL-11 can act synergistically with IL-3, IL-4 and SCF *in vitro* to shorten the G₀ period of early hematopoietic progenitors. It stimulates erythropoiesis in the presence of IL-3 or SCF and enhances IL-3-dependent megakaryocyte colony formation.

IL-11 promotes the development of other cell types, including adipocytes and osteoclasts, and stimulates the synthesis of hepatic acute-phase proteins.

Recombinant human IL-11 contains 178 amino acids and has a molecular mass of approximately 19 kDa. It migrates in SDS-PAGE with an apparent molecular mass of 23 kDa.

SOURCE

A DNA sequence encoding the 199 amino acid residue human IL-11 precursor¹ was expressed in Sf21 insect cells using a baculovirus expression system.

PURITY

Purity is greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is <1.0 EU per 1 µg cytokine, as determined by the LAL method.

ACTIVITY

The biological activity of recombinant human IL-11 is measured in a cell proliferation assay using T11, a subline of the IL-6-dependent murine plasmacytoma cell line T1165 that has been adapted to grow in IL-11.² The ED₅₀ for this effect is typically 0.06 - 0.24 ng/mL.

FORMULATION

Recombinant human IL-11 is lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 50 µg bovine serum albumin per 1 µg cytokine.

RECONSTITUTION

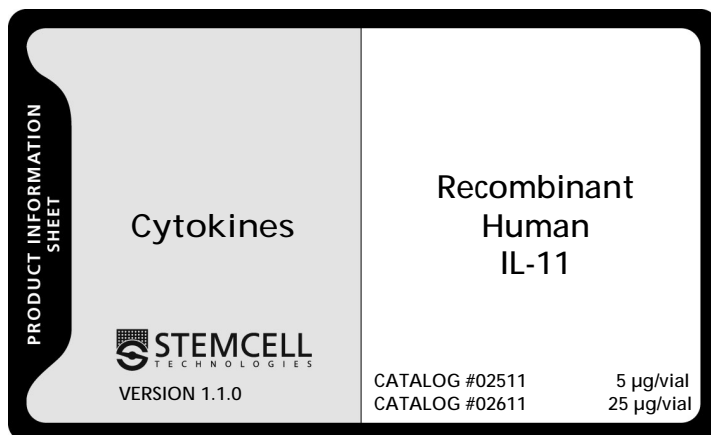
Reconstitute human IL-11 at a concentration greater than 10 µg/mL with sterile PBS containing at least 0.1% human or bovine serum albumin.

STABILITY AND STORAGE

Lyophilized human IL-11 is stable for up to twelve months from date of receipt at -20°C to -70°C.

Reconstituted human IL-11 can be stored under sterile conditions at 2°C - 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 freezing and thawing.



REFERENCES

1. Paul SR, Bennett F, Calvetti JA, Kelleher K, Wood CR, O'Hara RM Jr, Leary AC, Sibley B, Clark SC, Williams DA *et al.*: Molecular cloning of a cDNA encoding interleukin 11, a stromal cell-derived lymphopoietic and hematopoietic cytokine. *Proc Natl Acad Sci USA* 87: 7512-7516, 1990
2. Nordan RP, Pumphrey JG, Rudikoff S: Purification and NH₂-terminal sequence of a plasmacytoma growth factor derived from the murine macrophage cell line P388D1. *J Immunol* 139: 813-817, 1987

