

IL-11, Human

Cat. No.: Z02708-1

Size: 1.0 mg

Synonyms: Interleukin-11 (IL-11), Human

Description:

Interleukin 11 is a pleiotropic cytokine that was originally detected in the conditioned medium of an IL-1^a-stimulated primate bone marrow stromal cell line (PU-34) as a mitogen for the IL-6-responsive mouse plasmacytoma cell line T1165. IL-11 was also independently discovered as an adipogenesis inhibitory factor (AGIF). The human IL-11 cDNA encodes a 199 amino acid residue precursor polypeptide with a 21 amino acid residue hydrophobic signal that is processed proteolytically to generate the 178 amino acid residue mature protein. IL-11 contains no cysteine residues or potential glycosylation sites. IL-11 has multiple effects on both hematopoietic and non-hematopoietic cells. Many of the biological effects described for IL-11 overlap those for IL-6. In vitro, IL-11 can synergize with IL-3, IL-4 and SCF to shorten the G0 period of early hematopoietic progenitors. IL-11 also enhances the IL-3-dependent megakaryocyte colony formation. IL-11 has been found to stimulate the T cell dependent development of specific immunoglobulin-secreting B cell.

Amino Acid Sequence:

```
00001  MPGPPPPPPR  VSPDPRAELD  STVLLTRSLL  ADTRQLAAQL
00041  RDKFPADGDH  NLDLPLTAM  SAGALGALQL  PGVLRRLRAD
00081  LLSYLHRVQW  LRRAGGSSLK  TLEPELGTLQ  ARLDRLLRRL
00121  QLLMSRLALP  QPPDPPAPP  LAPPSSAWGG  IRAAHAILGG
00161  LHLLTDWAVR  GLLLLKTRL
```

Source: *E. coli*

Species: 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 > 1.0 × 10⁶ IU/mg.

Molecular Weight: Approximately 19.1 kDa, a single non-glycosylated polypeptide chain containing 179 amino acids.

Formulation: Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 95 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/μg of rHuIL-11 as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.