

## Recombinant Human Interleukin 1 alfa

Catalog Number	Size
AG133-10	10µg
AG133-50	50µg

### *Specifications and Use*

<b>Description</b>	Recombinant human IL-1α produced in E.coli is a single, non-glycosylated, polypeptide chain containing 158 amino acids.
<b>Source</b>	<i>E coli</i>
<b>Molecular Mass</b>	Approximately 18kDa.
<b>Purity</b>	≥97%, as determined by SDS-PAGE and HPLC method.
<b>Endotoxin Level</b>	≤1EU/µg, determined by the LAL method.
<b>Biological Activity</b>	Measured in a cell proliferation assay using D10.G4.1 cell line. The specific activity shall be not less than $1.6 \times 10^8$ IU/mg.
<b>Formulation</b>	Lyophilized from a 0.2µm filtered solution in PBS containing 0.1% HSA, pH7.4.
<b>Reconstitution</b>	It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of not less than 100µg/ml.
<b>Storage</b>	Lyophilized samples are stable for greater than six months from date of receipt at -20°C to -70°C. The reconstituted samples can be stored under sterile conditions at 2- 8°C for one month or at -20°C to -70°C for three months without detectable loss of activity. <b>Avoid repeated freeze-thaw cycles.</b>

### *Human Interleukin 1α*

Although IL-1α and IL-1β share approximately 25% amino acid sequence identity and recognize the same cell surface receptors, they are the products derived from two distinct genes. IL-1 production is generally considered as a consequence of inflammation, but recent evidence suggests that IL-1 is also temporarily upregulated during bone formation and the menstrual cycle induced in response to nervous system stimulation. Cells in particular known to produce IL-1 include osteoblasts, monocytes, macrophages, keratinocytes, Kupffer cells, hepatocytes, thymic and salivary gland epithelium, Schwann cells, fibroblasts and glia (oligodendroglia, astrocytes and microglia). IL-1α and IL-1β are both synthesized as 31 kDa precursors produced by monocytes and macrophages as a proprotein, which is proteolytically processed and released in response to cell injury, and thus induces apoptosis. IL-1α is a pleiotropic cytokine involved in various immune responses, inflammatory processes, and hematopoiesis. It has been suggested that the polymorphism of these genes is associated with rheumatoid arthritis and Alzheimer's disease.

**FOR RESEARCH USE ONLY**