

## PRODUCT DATA SHEET



Bioworld Technology, Inc.

### Recombinant Human Interleukin-1 alpha (rHuIL-1 $\alpha$ )

Catalog Number: PR1053

Source: Escherichia coli

Quantity: 2 $\mu$ g/10 $\mu$ g/1.0mg

#### Description

IL-1 alpha is a non-secreted proinflammatory cytokine produced in a variety of cells including monocytes, tissue macrophages, keratinocytes and other epithelial cells. Both IL-1alpha and IL-1beta binds to the same receptor and has similar if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. However, whereas IL-1beta is a secreted cytokine, IL-1alpha is predominantly a cell-associated cytokine.

#### Molecular Weight:

Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.

#### Purity:

>97% by SDS-PAGE and HPLC analyses.

#### Biological Activity:

Fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of murine D10S cells is less than 0.001 ng/ml, corresponding to a Specific Activity of  $\geq 1 \times 10^9$  IU/mg.

#### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

#### Formulation:

Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.5.

#### AA Sequence:

S A P F S F L S N V K Y N F M R I I K Y E F I L N D A L  
N Q S I I R A N D Q Y L T A A A L H N L D E A V K F D  
M G A Y K S S K D D A K I T V I L R I S K T Q L Y V T  
A Q D E D Q P V L L K E M P E I P K T I T G S E T N L L  
F F W E T H G T K N Y F T S V A H P N L F I A T K Q D  
Y W V C L A G G P P S I T D F Q I L E N Q A

#### Endotoxin:

Less than 1EU/ $\mu$ g of rHuIL-1 $\alpha$  as determined by LAL method.

#### 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  $<-20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

#### Storage:

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

#### Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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#### Bioworld Technology, Inc.

1660 South Highway 100, Suite 500 St. Louis Park, MN

55416, USA.

Tel: 6123263284

Email: [info@bioworld.com](mailto:info@bioworld.com)

Fax: 6122933841

#### Bioworld technology, co, Ltd.

No 9, weidi road Qixia District Nanjing, 210046, P, R.China.

Tel: 0086-025-86371664

Email: [info@biogot.com](mailto:info@biogot.com)

Fax: 0086-025-86213570