

**ChemWhat Technical Data Sheet (TDS)**

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<b>Catalog Number:</b>	101-01A
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.
<b>Quantity:</b>	2 $\mu$ g /10 $\mu$ g /1000 $\mu$ g
<b>AA Sequence:</b>	SAPFSFLSNV KYNFMRIIKY EFILNDALNQ SIIRANDQYL TAAALHNLDE AVKFDMGAYK SSKDDAKITV ILRISKTQLY VTAQDEDQPV LLKEMPEIPK TITGSETNLL FFWETHGTKN YFTSVAHPNL FIATKQDYWV CLAGGPPSIT DFQILENQA
<b>Purity:</b>	> 97 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine D10S cells is less than 1.0 pg/ml, corresponding to a specific activity of > 1.0 $\times$ 10 <sup>9</sup> IU/mg.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 1.0 EU/ $\mu$ g of rHuIL-1 $\alpha$ as determined by LAL method.
<b>Reconstitution:</b>	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 $\leq$ -20 $^{\circ}$ C . Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	Use a <b>manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 <math>^{\circ}</math>C as supplied.</li><li>● 1 month, 2 to 8 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	<b>ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.</b>

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***Human Interleukin-1 alpha***

Interleukin-1 alpha (IL-1 $\alpha$ ) is a non-secreted proinflammatory cytokine produced mainly by activated macrophages, as well as neutrophils, epithelial cells, and endothelial cells. It possesses metabolic, physiological, haematopoietic activities, and plays one of the central roles in the regulation of the immune responses. Both IL-1 $\alpha$  and IL-1 $\beta$  binds to the same receptor and has similar identical biological properties. Among various species, the amino acid sequence of mature IL-1 $\alpha$  is conserved 60 % to 70 % and human IL-1 has been found to be biologically active on murine cell lines. IL-1 $\alpha$  recently started to find effective application in cosmetic and dermatological formulations, which allow to significantly harmonizing derma architecture.