

**ChemWhat Technical Data Sheet (TDS)**

<b>Catalog Number:</b>	141-04
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 14.0 kDa, a single non-glycosylated polypeptide chain containing 125 amino acids.
<b>Quantity:</b>	5µg/20µg/1000µg
<b>AA Sequence:</b>	HGCNDSPLRE IINTLNQVTE KGTPCTEMFV PDVLTATRNT TENELICRAS RVLRFYFPR DVPPCLKNKS GVLGELRKLC RGVSGLSLSR SCTVNESTLT TLKDFLESJK SILRGKYLQS CTSMS
<b>Purity:</b>	> 95 % 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 rat splenocytes is less than 1.0 ng/ml, corresponding to a specific activity of > 1.0 × 10 <sup>6</sup> IU/mg.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4, 5% trehalose.
<b>Endotoxin:</b>	Less than 1 EU/µg of rRtIL-4 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 ≤ -20 °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>	<b>Use a 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 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °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>

***Rat Interleukin-4***

Interleukin-4 (IL-4) is a pleiotropic cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells and produced by mast cells, activated T cells and bone marrow stromal cells. It has many biological roles, including the stimulation of activated B-cell and T-cell proliferation, and the differentiation of CD4<sup>+</sup> T-cells into Th2 cells. IL-4 can enhance both secretion and cell surface expression of IgE and IgG1 and also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. The rat IL-4 shares about 40 % ~ 45 % a.a. sequence identity with human, mouse, rhesus macaque IL-4 and they are species-specific in their activities.