

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	121-21
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 15.0 kDa, a single non-glycosylated polypeptide chain containing 129 amino acids.
Quantity:	2µg/10µg/1000µg
AA Sequence:	HKSSPQGPDR LLIRLRHLID IVEQLKIYEN DLDPELLSAP QDVKGHCEHA AFACFQKAKL KPSNPGNKT FIIDLVAQLR RRLPARRGGK KQKHIACPS CDSYEK RTPK EFLERLKWLL QKMIHQHLS
Purity:	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human N1186 T cells is less than 25 ng/ml, corresponding to a specific activity of > 4.0 × 10 ⁴ IU/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, pH 7.4.
Endotoxin:	Less than 0.1 EU/µg of rMuIL-21 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 °C. Further dilutions should be made in appropriate buffered solutions.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.

Murine Interleukin-21

IL-21 is encoded by IL-21 gene located on Chr. 4 in mouse. It is a pleiotropic cytokine produced by CD4⁺ T cells in response to antigenic stimulation and can regulating immune system cells, for instance cytotoxic T cells and natural killer cells. Additionally, it can induce target cells division or proliferation. IL-21 elicits its effect through binding to IL-21R, which also contains the gamma chain found in other cytokine receptors such as IL-2, IL-4, IL-7, IL-9 and IL-15. IL-21/IL-21R interaction triggers a cascade of events which includes activation of the tyrosine kinases JAK1 and JAK3, followed by activation of the transcription factors STAT1 and STAT3. IL-21 shows having much relation with clinical illnesses, including cancer immunotherapy, viral infections and allergies. The murine IL-21 precursor contains a predicted 17 amino acid (a.a.) signal sequence and a 129 a.a. mature chain. Mature murine IL-21 shares 66 %, 59 %, 58 % and 88 % a.a. sequence identity with mature canine, human, rabbit and rat IL-21, respectively.