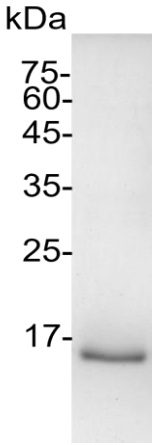
PRODUCT INFORMATION

GMP® IL-21 (Interleukin-21), Human

v. 250301

Catalog number	C01026-GMP-100 / C01026-GMP-1000
Package	100 µg / 1 mg
Description	Interleukin-21 (IL-21) belongs to the IL-15/IL-21 family. It is a cytokine with immunoregulatory activity. Cytokines are proteinaceous signaling compounds that are major mediators of the immune response. They control many different cellular functions including proliferation, differentiation and cell survival/apoptosis but are also involved in several pathophysiological processes including viral infections and autoimmune diseases. IL-21 is a cytokine that has potent regulatory effects on cells of the immune system, including natural killer (NK) cells and cytotoxic T cells that can destroy virally infected or cancerous cells. This cytokine induces cell division/proliferation in its target cells.
Expression System	*Escherichia coli*
Species of Origin	Human
Affinity Tag	His Tag (C-term)
Sequence	Gln32-Ser162
Endotoxin level	<0.05 EU per 1 µg of the protein by the LAL method.
Activity	Measure by its ability to enhance IFN gamma secretion in NK-92 cells. The ED_{50} for this effect is <10 ng/mL.
Purity	>95% as determined by SDS-PAGE analysis.
Mycoplasma	Not detected
Form	Lyophilized
Storage Buffer	Lyophilized from a 0.2 µm filtered solution of PBS, pH 8.0.
Reconstitution	It is recommended to reconstitute the lyophilized protein in sterile H_2O to a concentration not less than 0.5 mg/mL and incubate the stock solution for at least 20 min to ensure sufficient re-dissolved.
Stability & Storage	This product is stable after storage at: • -20°C for 12 months in lyophilized state from date of receipt. • -20°C or -80°C for 1 month under sterile conditions after reconstitution. Avoid repeated freeze/thaw cycles.

Specification	Croyez GMP® recombinant proteins are manufactured in ISO 13485:2016 and GMP-certified facility. The processes include: • Animal-free reagent and laboratory • Manufactured and tested under GMP guideline • Testing and traceability of raw material • Records of the maintenance and equipment calibration • Personnel training records • Batch-to-batch consistency • Documentation of QA control and process changes • Manufactured and tested under an ISO 13485:2016 certified quality management system • Stability monitor of product shelf-life
Reference	1. Spolski R and Leonard W.J. (2014) Nature Reviews Drug Discovery 13(5):379-95. 2. Leonard WJ, Spolski R. (2005) Nat Rev Immunol. 5,9: 688-98. 3. Brandt K. et al. (2007) Cytokine Growth Factor Rev. 18,3-4: 223-32. 4. Sim GC, Radvanyi L. (2014) Cytokine Growth Factor Rev. 25,4: 377-90.



SDS-PAGE analysis of GMP® IL-21, Human

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