

IL-29 Protein, Human, Recombinant

General Information

Synonyms:	interferon, λ 1;IL-29;IL29;interferon, lambda 1;IFNL1
Protein Construction:	A DNA sequence encoding the human IFNL1 (NP_742152.1) (Met1-Thr200) was expressed with an initial Met. Predicted N terminal: Met
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8IU54
Molecular Weight:	20.2 kDa (predicted)

QC Testing

Biological Activity:	Measured in antiviral assays using HepG2 cells infected with vesicular stomatitis virus. The ED50 for this effect is typically 10-39 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin-29 (IL-29), also known as cytokine Zcyto21, Interferon lambda-1, IFN-lambda-1, and IFNL1, is a secreted protein that belongs to the IL-28 / IL-29 family. IL-29 is a cytokine with immunomodulatory activity. IL-29 is highly similar in amino acid sequence to the IL-28. IL-28 and IL-29 are induced by a viral infection and showed antiviral activity. IL-28 and IL-29 interacted with a heterodimeric class II cytokine receptor that consisted of IL-10 receptor beta (IL-10Rbeta) and an orphan class II receptor chain, designated IL-28Ralpha. IL-29 plays an

important role in host defenses against microbes and its gene is highly upregulated in cells infected with viruses. IL-29 may play a role in antiviral immunity. IL-29 up-regulates MHC class I antigen expression. It is a Ligand for the heterodimeric class II cytokine receptor composed of IL10RB and IL28RA. The ligand/receptor complex seems to signal through the Jak-STAT pathway.

Reference

Li MC,et al.(2006) Liposome-mediated IL-28 and IL-29 expression in A549 cells and anti-viral effect of IL-28 and IL-29 on WISH cells. *Acta Pharmacol Sin.* 27(4): 453-9.

Wang J,et al.(2009) Differentiated human alveolar type II cells secrete antiviral IL-29 (IFN-lambda 1) in response to influenza A infection. *J Immunol.* 182(3): 1296-304.

Jordan WJ,et al.(2007) Modulation of the human cytokine response by interferon lambda-1 (IFN-lambda1/IL-29). *Genes Immun.* 8(1): 13-20.

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