Datasheet

Cat. No. P1302

Recombinant Human Interferon-lambda1/Interleukin-29

Information

Gene ID	282618
Accession #	Q8IU54
Alternate Names	Cytokine Zcyto21
Source	Escherichia coli.
M.Wt	Approximately 19.8 kDa, a single non-glycosylated polypeptide chain containing 181 amino acids.
AA Sequence	GPVPTSKPTT TGKGCHIGRF KSLSPQELAS FKKARDALEE SLKLKNWSCS SPVFPGNWDL RLLQVRERPV ALEAELALTL KVLEAAAGPA LEDVLDQPLH TLHHILSQLQ ACIQPQPTAG PRPRGRLHHW LHRLQEAPKK ESAGCLEASV TFNLFRLLTR DLKYVADGNL CLRTSTHPES T
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 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
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
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.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by an anti-viral assay using human HepG2 cells infected with encephalomyocarditis is less than 5 ng/ml, corresponding to a specific activity of > 2.0 × 10 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5μg	100μg	500μg
Recombinant Human Interferon-lambda1/Interleukin-29	5μg	100μg	500μg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles
- 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

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIFN-λ1/IL-29 as determined by LAL method.

Description

IL-28A, IL-28B, and IL-29, also named interferon- λ 2 (IFN- λ 2), IFN- λ 3, and IFN- λ 1, respectively, are newly identified class II cytokine receptor ligands that are distantly related to members of the IL-10 family (11-13 % a.a. sequence identity) and the type I IFN family (15-19 % a.a. sequence identity). The expression of IL-28A, B, and IL-29 is induced by virus infection or double-stranded RNA. All three cytokines exert bioactivities that overlap those of type I IFNs, including antiviral activity and up-regulation of MHC class I antigen expression. The three proteins signal through the same heterodimeric receptor complex that is composed of the IL-10 receptor β (IL-10 R β) and a novel IL-28 receptor α (IL-28 R α , also known as IFN- λ R1). Ligand binding to the receptor complex induces Jak kinase activation and STAT1 and STAT2 tyrosine phosphorylation.

Reference

1. Miller EK, Hernandez JZ, Wimmenauer V, et al. 2012. Am J Respir Crit Care Med, 185: 508-16
2. Li Y, Xie J, Xu X, et al. 2012. Protein Cell,
3. Jordan WJ, Eskdale J, Srinivas S, et al. 2007. Genes Immun, 8: 254-61
4. Pekarek V, Srinivas S, Eskdale J, et al. 2007. Genes Immun, 8: 177-80
5. Megjugorac NJ, Gallagher GE, Gallagher G. 2010. Blood, 115: 4185-90.

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