



Certificate of Analysis

Human Interleukin-28A/Interferon Lambda 2, human cell-expressed (HCE)

Catalog No: 11720-1

Lot No: 7567

Size: $\geq 1 \times 10^5$ units/vial

Description: Recombinant Human Interleukin-28A/Interferon Lambda 2

Volume: 0.100 ml

Activity: 6.16×10^6 units/ml (A549/EMCV)

Specific Activity: 4.07×10^7 units/mg (A549/EMCV)

Buffer: Phosphate buffered saline (PBS) containing 0.1% bovine serum albumin (BSA)

Endotoxin: < 1 EU/ μ g

Molecular Weight: 19.8 kDa

Purity: $> 95\%$

Purification Method: Ion exchange, hydrophobic interaction and/or size exclusion chromatography

Source: Recombinant DNA expressed in human cells

Synonyms: Hu-IL-28A; Hu-IFN- λ 2

Accession #: NP_742150.1

Assay Used to Measure Bioactivity: Interferon was titrated with the use of the cytopathic effect inhibition assay as listed

Human (A549/EMCV) – performed as described [Budd, *et al.* (1985) *Canc. Chem. Pharm.* 12:39]. The EC_{50} for interferon in this assay is ~ 1 U/ml.

The units are determined by use of a Human Interferon Lambda 1 (Hu-IFN- λ 1) laboratory standard calibrated to the international reference standard for Human Interferon Lambda 1 (Hu-IFN- λ 1) 10/176 provided by the National Institute for Biological Standards and Control (NIBSC). Please note that IFN assays vary between labs and assay systems [Meager, *et al.* (2001) *J. Immunol. Meth.* 257:17. Meager and Das (2005) *J. Immunol. Meth.* 306:1].

Product Information: Interferon lambda 1 (IL-29), interferon lambda 2 (IL-28A) and interferon lambda 3 (IL-28B) are recently identified members of the IL-10 family which have antiviral activity similar to type I interferons. They mediate this activity through a 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). Engagement of this receptor leads to Jak-STAT signaling and gene expression. Many of the effects of interferon lambda on cells overlap that of Type I interferon. Unlike the type I interferon receptor which is found on virtually all cells, the type III receptor is limited in its expression¹. Interferon lambda 1 encodes a 181 amino acid mature protein which is 67% and 69% identical with interferon lambda 2 and interferon lambda 3, respectively.

Shipping Conditions: Dry ice

Physical State of Product During Shipping: Frozen

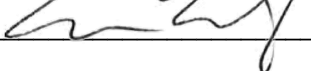
Storage Conditions/Comments: After receipt, the product may be stored at -20°C for short-term use (≤ 6 months). For long-term storage, we recommend storing the product at -70°C or below for retention of full activity. Thaw product vial by incubation in cold tap water until just thawed – the contents of the tube should be apportioned in separate tubes so that freezing and thawing is kept to a minimum. Refreezing should be done on dry ice or in a dry ice/alcohol bath. Further dilution of the product should be in buffers containing protein such as 0.1% bovine serum albumin (BSA). For more information on protein handling, visit our Resource Library at www.pbl assaysci.com.



References:

1. Donnelly RP, Kotenko SV, 2010. Interferon-lambda: a new addition to an old family. *J Interferon Cytokine Res.* 8: 555-564.

Authorization

Released by: _____ 

Date: October 18, 2022

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