



Certificate of Analysis

Mouse Interferon Alpha A

Catalog No: 12100-1

Lot No: 7239

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

Description: Recombinant Mouse Interferon Alpha A

Volume: 0.1 ml

Activity: 1.90×10^6 units/ml

Specific Activity: 4.73×10^7 units/mg

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

Endotoxin: < 1 EU/ μ g

Molecular Weight: 19.3 kDa

Purity: $> 95\%$

Purification Method: A combination of ion exchange, hydrophobic interaction and size exclusion chromatography

Source: Murine Leukocyte Interferon cDNA expressed in *E. coli*

Synonyms: IFNA3, Interferon Alpha 3

Gene: IFNA

Accession #: NP_996753

Assay Used to Measure Bioactivity: Interferon was titrated with the use of the cytopathic effect inhibition assay as described [Familletti, *et al.* (1981) "A Convenience and Rapid Cytopathic Effect Inhibition Assay for Interferon," in *Methods in Enzymology*, Vol. 78 (S. Pestka, ed.), Academic Press, New York, 387-394] with the exception that EMCV rather than VSV was used as the challenge. The activity was determined relative to a lab standard of Mu IFN- α A which was calibrated to the NIH Murine IFN- α standard (Ga02-901-511). Mouse (L929/EMCV) in this assay the EC_{50} for IFN is ~ 5 U/ml. Lot Activity was derived from multiple determinations in the above assay. 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: Most mammalian species have multiple IFN- α subtypes. Although the reasons for these multiple subtypes are not fully known, there are clear cell type and temporal differences in their expression. A study established a nomenclature for the murine IFN- α subtypes (van Pesch, *et al.* 2004) and determined relative activities of the subtypes with protein quantification by phosphorimaging of metabolically-labeled protein. In this study, Mu-IFN- α A was defined to have average antiviral activity in order to compare the potencies of the other subtypes.

Comparison of Mu Alpha-A and Mu Alpha-4 Antiviral Activity

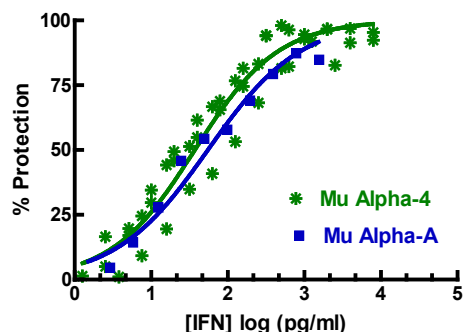


Figure 1: The activity of Mu Alpha-A and Mu Alpha-4 was compared in an L929/EMCV CPE assay. The EC_{50} for Mu Alpha-A in this experiment was 54 pg/ml, while the EC_{50} for Mu Alpha-4 was 37 pg/ml. Similar results were obtained for several batches of Mu Alpha-A.

Results are representative and may vary depending upon experimental conditions.

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.

Authorization

Released by: _____

Date: July 2, 2020

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