



## Certificate of Analysis

### Mouse Interferon Alpha A, Carrier Free

**Catalog No:** 12100-9

**Lot No:** 7188

**Size:** 6 x 10<sup>6</sup> units/vial

**Description:** Recombinant Mouse Interferon Alpha A, Carrier Free

**Volume:** 0.062 ml

**Activity:** 9.67 x 10<sup>7</sup> units/ml

**Specific Activity:** 4.98 x 10<sup>7</sup> units/mg

**Buffer:** 20 mM Sodium Phosphate pH 6.4; 0.5 M NaCl; 6% Glycerol

**Endotoxin:** < 1 EU/μg

**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

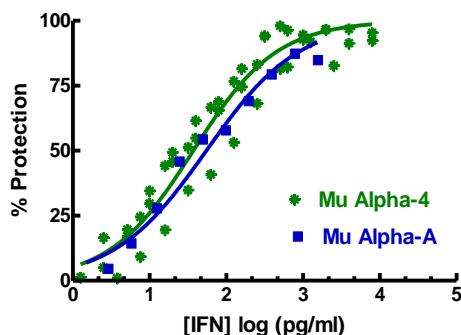
**Gene:** IFNA

**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-αA which was calibrated to the NIH Murine IFN-α standard (Ga02-901-511). Mouse (L929/EMCV) in this assay the EC<sub>50</sub> 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-αA 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<sub>50</sub> for Mu Alpha-A in this experiment was 54 pg/ml, while the EC<sub>50</sub> 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](http://www.pbl assaysci.com).

**Authorization**

Released by: \_\_\_\_\_

Date: February 24, 2020

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