



Certificate of Analysis

Human Interferon Alpha A (Alpha 2a)

Catalog No: 11100-1

Lot No: 7451

Size: $\geq 5 \times 10^6$ units/vial

Description: Recombinant Human Interferon Alpha A (Alpha 2a) (Hu-IFN- α -2a)

Volume: 0.100 ml

Activity: 5.23×10^7 units/ml (MDBK/VSV)

Specific Activity: 2.85×10^8 units/mg (MDBK/VSV)

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

Endotoxin: < 1 EU/ μ g

Molecular Weight: 19.2 kDa

Purity: $> 95\%$

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

Source: cDNA obtained from human leukocyte mRNA expressed in *E. coli*

Synonyms: None

Accession #: V00549

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

Bovine (MDBK/VSV) – performed as described [Rubinstein, *et al.* (1981) *J. Virol.* 37(2):755]. The EC₅₀ for interferon in this assay is ~ 5 U/ml. Lot Activity was derived from multiple determinations in the above assay.

Human (A549/EMCV) – performed as described [Budd, *et al.* (1985) *Canc. Chem. Pharm.* 12:39]. The EC₅₀ for interferon in this assay is ~ 1 U/ml. **Activity:** 6.59×10^7 units/ml **Specific Activity:** 3.60×10^8 units/mg

The units are determined by use of a Human IFN Alpha A (Hu-IFN- α A [2a]) laboratory standard calibrated to the international reference standard for human interferon alpha A (Hu-IFN- α A [2a]) provided by the National Institutes of Health [Meager, *et al.* (2001) *J. Immunol Methods.* 257 (1-2):17-33]. 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].

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. When thawing, 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) or tissue culture media with serum. Dilution of material below 2×10^5 units/ml for freezing is not recommended. One freeze-thaw cycle is equivalent to thawing an aliquot prepared from the material received. [The activity measured after one freeze-thaw cycle is 5.82×10^7 units/ml (MDBK/VSV)]. For more information on protein handling, visit our Resource Library at www.pblassaysci.com.

Authorization

Released by: _____

Date: December 14, 2021

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