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Certificate of Analysis

Human Interferon Alpha 4a (Alpha M1)

Catalog No: 11177-1
Lot No: 7395
Size: ≥ 1 x 10^5 units

Description: Recombinant Human Interferon Alpha 4a (Alpha M1) (Hu-IFN-α M1)
Volume: 0.100 ml
Activity: 1.26 x 10^6 units/ml (MDBK/VSV)
Specific Activity: 4.20 x 10^8 units/mg (MDBK/VSV)
Buffer: Phosphate buffered saline (PBS) containing 0.1% bovine serum albumin (BSA)
Endotoxin: < 1 EU/µg
Molecular Weight: 19.4 kDa
Purity: ≥ 95%
Purification Method: Purified from *E. coli* by a combination of Ion Exchange, Hydrophobic Interaction and Size Exclusion Chromatography
Source: cDNA obtained from human leukocyte mRNA expressed in *E. coli*
Human Gene: IFNA4
Synonyms: Hu-IFN-α M1
Accession Number: NM_021068

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

Bovine (MDBK/VSV) – Performed as described [Rubinstein, *et al.* (1981) *J. Virol.* 37 (2):755]. The EC_{50} 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 EC_{50} for interferon in this assay is ~1 U/ml. **Activity:** 5.41 x 10^5 units/ml **Specific Activity:** 1.80 x 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. Meth.* 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 x 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 1.34 x 10^6 units/ml (MDBK/VSV)]. For more information on protein handling, visit our Resource Library at www.pblassaysci.com.

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Authorization

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