**Product Description**

Interferon-alpha (IFN-α) is a type I interferon, produced by virus infected cells, and is released as a soluble factor to initiate antiviral responses (Isaacs & Lindenmann). IFN-α2 is the most potent IFN-α used in fundamental research and in most clinical applications. The best known IFN-α2 subvariants, 2A and 2B, differ by only one or two amino acids at positions 23 and/or 34 of the mature protein (von Gabain et al.). Type I IFNs exert potent antitumor activity by increasing the cytotoxic activity of NK and T cells, as well as inhibiting the proliferation of cancer cells (Paul et al.). Additionally, it has been shown that proinflammatory IFN-α modulates the function of B cells in patients with systemic lupus erythematosus (Chang et al.) and pegylated form of IFN-α 2A and 2B has implications in the treatment of Hepatitis C (Foster et al.).

**Product Information**

**Alternative Names:** IFN-alpha 2, IFNA2, IFNA2b  
**Accession Number:** P01563 (VAR_004012)  
**Amino Acid Sequence:** MCDLPQTHSL GSRRTLMLLA QMRRISLFSC LKDRHDFGFP QEEFGNQFQK AETIPVLHEM IQQIFNLFST KDSSAAWDET LLDKFYETLY QQLNDLEACV IQGVGVTETP LMKEDSILAV RKYFQGITLTY LKEKKYSPCA WEVVRAEIMR SFSLSTNLQE SLRSKE  
**Predicted Molecular Mass:** 19.4 kDa  
**Species:** Human  
**Cross Reactivity:** Not determined  
**Formulation:** Lyophilized from a sterile filtered aqueous solution containing 0.1% trifluoroacetic acid.  
**Source:** E. coli

**Specifications**

- **Activity:** The specific activity is ≥ 2 × 10^8 units/mg (EC50 ≤ 5 pg/mL) as determined in a viral challenge assay using EMC virus on A549 cells.  
- **Purity:** ≥ 95 %  
- **Endotoxin Level:** Measured by kinetic limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/μg protein.

**Preparation and Storage**

- **Storage:** Store at -20°C to -80°C.  
- **Stability:** Stable as supplied for 12 months from date of receipt.  
- **Preparation:** Centrifuge vial before opening. Resuspend the product in sterile water containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 month or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately BSA is not required.
Data

(A) The biological activity of Human Recombinant IFN-alpha 2B was measured with A549 cells exposed to the encephalomyocarditis (EMC) virus in a cytopathic effect (CPE) assay. Cell survival was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the cytokine at which cell survival is at 50% of maximum. The EC50 in the example above is 1.0 pg/mL.

(B) 1 μg of Human Recombinant IFN-alpha 2B was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IFN-alpha 2B has a predicted molecular mass of 19.4 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References


