

## Cytokines

### Human Recombinant IFN- $\alpha$ 2B

Interferon- $\alpha$  2B



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

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Catalog # 78077  
78077.1

20  $\mu$ g  
100  $\mu$ g

## Product Description

Interferon- $\alpha$  (IFN- $\alpha$ ) is a type I interferon, produced by virus infected cells, and is released as a soluble factor to initiate antiviral responses (Isaacs & Lindenmann). IFN- $\alpha$ 2 is the most potent IFN- $\alpha$  used in fundamental research and in most clinical applications. The best known IFN- $\alpha$ 2 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- $\alpha$  modulates the function of B cells in patients with systemic lupus erythematosus (Chang et al.) and pegylated form of IFN- $\alpha$  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 LLDKFTYELY QQLNDLEACV IQGVGVETETP LMKEDSILAV RKYFQRITLY 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

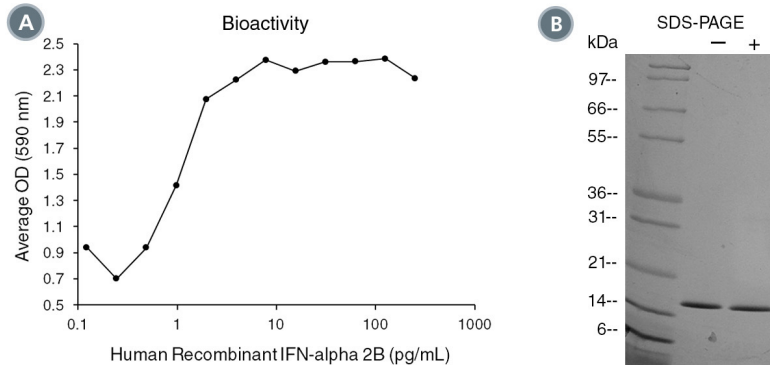
## Specifications

**Activity:** The specific activity is  $\geq 2 \times 10^8$  units/mg ( $EC_{50} \leq 5$  pg/mL) as determined in a viral challenge assay using EMC virus on A549 cells.  
**Purity:**  $\geq 95$  %  
**Endotoxin Level:** Measured by kinetic limulus amoebocyte lysate (LAL) analysis and is  $\leq 1$  EU/ $\mu$ g 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 EC<sub>50</sub> is defined as the effective concentration of the cytokine at which cell survival is at 50% of maximum. The EC<sub>50</sub> in the example above is 1.0 pg/mL. (B) 1  $\mu$ g 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

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## References

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