

TECHNICAL DATA SHEET

Recombinant Human IFN-beta (Carrier-free)

Catalog Number: 21-8699

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human IFN-beta (Carrier-free)

DESCRIPTION

Interferon-beta (IFN-b) is a member of the type I family of interferons, also including IFN-alpha and IFN-omega. These three interferons share a common cell surface receptor, INFAR, involved in both ligand binding and signal transduction. IFN-b has antiviral, antibacterial and anticancer activities and has been used as a treatment for multiple sclerosis. Proteins of this family also affect cell proliferation and modulate immune responses.

MOLECULAR MASS

Recombinant human IFNbeta is an 20.0 kDa protein containing 166 amino acid residues. Due to glycosylation, IFNbeta has an approximate MW of 22.3 kDa based on SDS-PAGE gel and Mass Spectrometry.

AMINO ACID SEQUENCE

MSYNLLGFLQ RSSNFQCQKL LWQLNGRLEY CLKDRMNFDI PEEIKQLQKF QKEDAALTIY EMLQNIFAIF RQDSSSTGWN ETIVENLLAN VYHQINHLKT VLEEKLEKED FTRGKLMSSL HLKRYYYGRIL HYLKAKEYSH CAWTIVRVEI LRNFYFINRL TGYLRLN

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

95 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Monkey, Mouse

BIOACTIVITY

Assay #1: Measured by its ability to induce apoptosis in HeLa cells. The expected ED₅₀ for this effect is 20-30 ng/ml. **Assay #2:** Determined by its ability to stimulate the proliferation of human TF-1 cells. The expected ED₅₀ is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10⁷ units/mg.

RESEARCH AREAS

AIDS/HIV; Cancer; Immune System; Neurobiology

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Porrini AM and Reder AT. 1994. Cell Immunol. 157(2): 428-438. Lewerenz M, Mogensen KE and Uze G. 1998. J Mol Biol. 282(3): 585-599. van Boxel-Dezaire AH, Zula JA, Xu Y, Ransohoff RM, Jacobberger JW and Stark GR. 2010. J Immunol. 185(10): 5888-5899. Takaoka A and Taniguchi T. 2003. Cancer Sci. 94(5): 405-411.

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