


## Human IFN- $\beta$ protein

Cat #: PRP100183

Size: 20 $\mu$ g/100 $\mu$ g/1mg

### Product Information

	<b>Product Name:</b> Human IFN- $\beta$ protein		
<b>REF</b>	<b>Catalog Number:</b> PRP100183	<b>LOT</b>	<b>Lot Number:</b> Refer to product label
	<b>Purity:</b> > 95 % as determined by SDS-PAGE		
	<b>Storage:</b> Store at -20°C		<b>Preparation method:</b> CHO Stable Cells
	<b>Shipping:</b> The product is shipped at ambient temperature.		

**Background:** Interferons (IFNs) are natural glycoproteins belonging to the cytokine superfamily, and are produced by the cells of the immune system of most vertebrates in response to challenges by foreign agents such as viruses, parasites and tumor cells. Interferon-beta (IFN- $\beta$ ) is an extra-cellular protein mediator of host defense and homeostasis. IFN- $\beta$  has well-established direct antiviral, antiproliferative and immunomodulatory properties. Recombinant IFN- $\beta$  is approved for the treatment of relapsing-remitting multiple sclerosis. The recombinant IFN- $\beta$  protein has the theoretical potential to either treat or cause autoimmune neuromuscular disorders by altering the complicated and delicate balances within the immune system networks. It is the most widely prescribed disease-modifying therapy for multiple sclerosis (MS). Large-scale clinical trials have established the clinical efficacy of IFN- $\beta$  in reducing relapses and slowing disease progression in relapsing-remitting MS. IFN- $\beta$  therapy was shown to be comparably beneficial for opticospinal MS (OSMS) and conventional MS in Japanese. IFN- $\beta$  is effective in reducing relapses in secondary progressive MS and may have a modest effect in slowing disability progression. In addition to the common antiviral activity, IFN- $\beta$  also induces increased production of the p53 gene product which promotes apoptosis, and thus has therapeutic effect against certain cancers. The role of IFN- $\beta$  in bone metabolism could warrant its systematic evaluation as a potential adjunct to therapeutic regimens of osteolytic diseases. Furthermore, IFN- $\beta$  might play a beneficial role in the development of a chronic progressive CNS inflammation.

**Sequence:** Amino acid sequence derived from human IFN $\beta$  (P01574) (Met1-Asn187) was expressed.

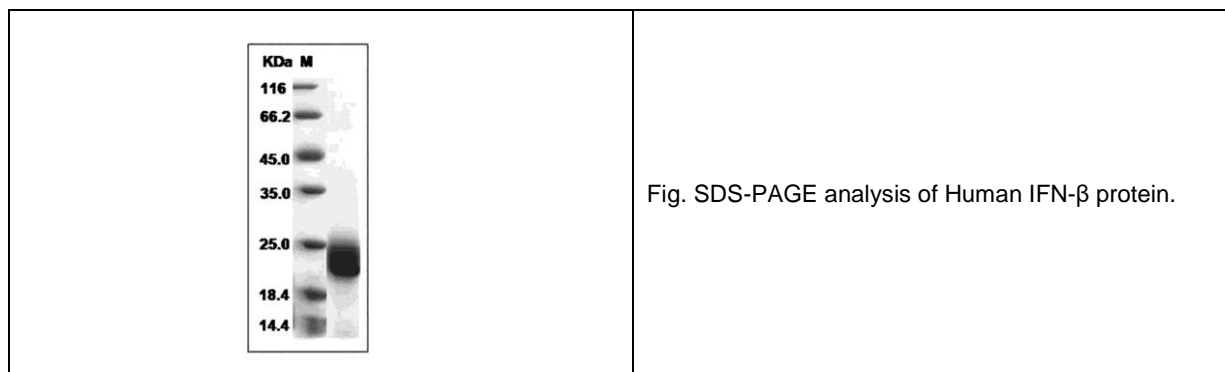
**Protein length:** The recombinant human IFN $\beta$  consists of 166 amino acids and predicts a molecular mass of 20 KDa. It migrates as an approximately 20-23 KDa band in SDS-PAGE under reducing conditions.

**Formulation:** Lyophilized from sterile 50mM Hepes, pH 7.0.

**Storage Instructions:** Lyophilized Human IFN- $\beta$  protein product should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it

is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Usage notes:** Always centrifuge tubes before opening. It is recommended to reconstitute the lyophilized Human IFN- $\beta$  protein in 30 mM Acetic acid not less than 100 $\mu$ g/ml, which can then be further diluted to other aqueous solutions.



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