

**DESCRIPTION**

<b>Source</b>	Human embryonic kidney cell, HEK293-derived mouse IFN-beta protein Ile22-Asn182 Accession # P01575
<b>N-terminal Sequence Analysis</b>	Ile22
<b>Structure / Form</b>	Monomer
<b>Predicted Molecular Mass</b>	20 kDa

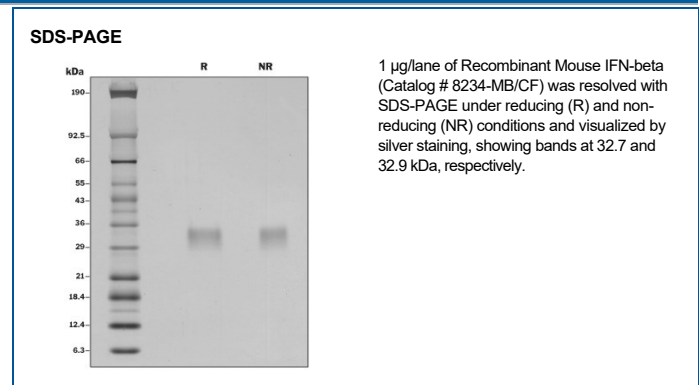
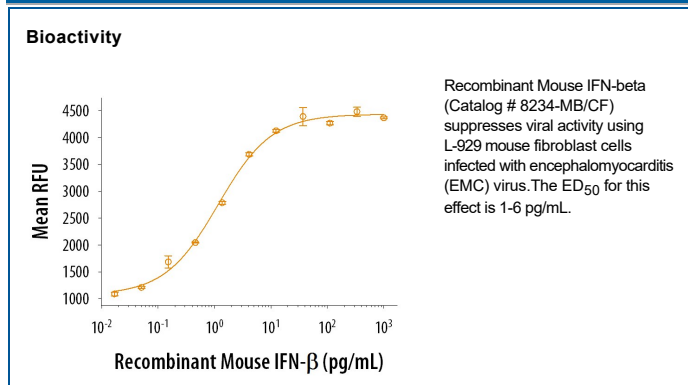
**SPECIFICATIONS**

<b>SDS-PAGE</b>	30-38 kDa, reducing conditions
<b>Activity</b>	Measured in an anti-viral assay using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. Vogel, S.N. <i>et al.</i> (1982) Infect. Immunol. <b>38</b> :681. The ED <sub>50</sub> for this effect is 1-6 pg/mL.  The specific activity of recombinant Mouse IFN-β is approximately 1.2 x 10 <sup>9</sup> IU/mg, which is calibrated against Murine IFN-β WHO International Standard. The Murine IFN-β WHO International Standard (NR-3079) was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH.
<b>Endotoxin Level</b>	<0.10 EU per 1 μg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution in PBS and Tween® 80. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 μg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**



**BACKGROUND**

Interferon beta (IFN- $\beta$ ), also known as fibroblast IFN, is a secreted, approximately 22 kDa member of the type I interferon family of molecules (1). Mature mouse IFN- $\beta$  shares 75% and 47% amino acid sequence identity with the rat and human proteins, respectively. Fibroblasts are the major producers of IFN- $\beta$ , but it can also be produced by dendritic cells, macrophages, and endothelial cells in response to pathogens (2). It is transcriptionally regulated by TRAF3, IRF3, IRF7, and NF- $\kappa$ B (3, 4). IFN- $\beta$ -deficient mice show increased susceptibility to experimental autoimmune encephalomyelitis (EAE), a disease model of human multiple sclerosis (MS) (5). Furthermore, IFN- $\beta$  has been shown to suppress the Th17 cell response in both MS and EAE and has commonly been used as a treatment for MS (6-10). IFN- $\beta$  can additionally induce the expression of the anti-inflammatory cytokine IL-10 (11).

**References:**

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