Recombinant Mouse IFN-β

Catalog Number: 8234-MB/CF

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Ile22-Asn182 Accession # P01575
N-terminal Sequence Analysis	Ile22
Structure / Form	Monomer
Predicted Molecular Mass	20 kDa

SPECIFICATIONS

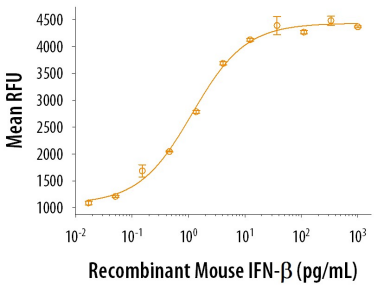
SDS-PAGE	30-38 kDa, reducing conditions
Activity	Measured in an anti-viral assay using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. Vogel, S.N. *et al.* (1982) Infect. Immunol. **38**:681. The ED_{50} for this effect is 1-6 pg/mL. The specific activity of recombinant Mouse IFN-β is approximately 1.2 x 10^9 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.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and Tween® 80. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

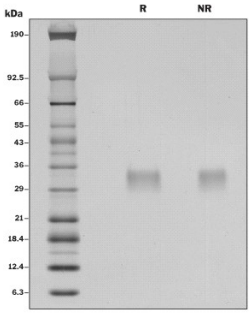
DATA

Bioactivity



Recombinant Mouse IFN-beta (Catalog # 8234-MB/CF) suppresses viral activity using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus.The ED_{50} for this effect is 1-6 pg/mL.

SDS-PAGE



1 µg/lane of Recombinant Mouse IFN-beta (Catalog # 8234-MB/CF) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing bands at 32.7 and 32.9 kDa, respectively.

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BACKGROUND

Interferon beta (IFN-β), also known as fibroblast IFN, is a secreted, approximately 22 kDa member of the type I interferon family of molecules (1). Mature mouse IFN-β shares 75% and 47% amino acid sequence identity with the rat and human proteins, respectively. Fibroblasts are the major producers of IFN-β, 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-κB (3, 4). IFN-β-deficient mice show increased susceptibility to experimental autoimmune encephalomyelitis (EAE), a disease model of human multiple sclerosis (MS) (5). Furthermore, IFN-β 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-β can additionally induce the expression of the anti-inflammatory cytokine IL-10 (11).

References:

1. González-Navajas, J.M. *et al.* (2012) Nat. Rev. Immunol. **12**:125.
2. Reder, A.T. and X. Feng (2013) Front. Immunol. **4**:281.
3. Schafer, S.L. *et al.* (1998) J. Biol. Chem. **273**:2714.
4. Häcker, H. *et al.* (2006) Nature **439**:204.
5. Teige, I. *et al.* (2003) J. Immunol. **170**:4776.
6. Shinohara, M.L. *et al.* (2008) Immunity **29**:68.
7. Guo, B. *et al.* (2008) J. Clin. Invest. **118**:1680.
8. Ramgolam, V.S. and S. Markovic-Plese (2010) Endocr. Metab. Immune Disord. Drug Targets **10**:161.
9. Martín-Saavedra, F.M. *et al.* (2008) Mol. Immunol. **45**:4008.
10. Inoue, M. and M.L. Shinohara (2013) Immunology **139**:11.
11. Wang, H. *et al.* (2011) J. Immunol **186**:675.

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