Recombinant Mouse IFN-alpha 6/IFNA6

Catalog Number: 10207-IF

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived mouse IFN-alpha 6/IFNA6 protein Cys24-Glu189 Accession # Q810G5
N-terminal Sequence Analysis	Cys24
Predicted Molecular Mass	19 kDa

SPECIFICATIONS

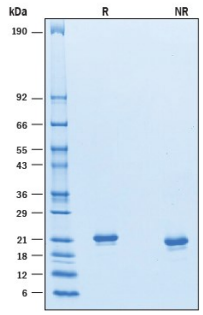
SDS-PAGE	19-22 kDa, under reducing conditions
Activity	Measured in an anti-viral assay using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. Vogel, S.N. *et al.* (1982) Infect. Immunol. **38**:681. The ED_{50} for this effect is <100 pg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
Shipping	The product is shipped with polar packs. 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.

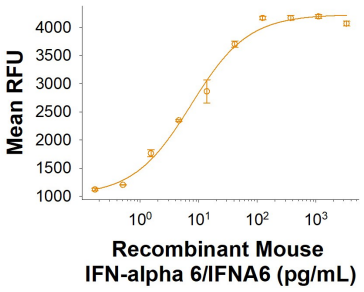
DATA

SDS-PAGE



2 µg/lane of Recombinant Mouse IFN-alpha 6/IFNA6 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 19-22 kDa.

Bioactivity



Recombinant Mouse IFN-alpha 6/IFN6 (Catalog # 10207-IF) suppresses viral activity on L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. The ED_{50} for this effect is <100 pg/mL

BACKGROUND

Interferons (IFN) are a family of cytokines with potent antiviral, antiproliferative and immunomodulatory properties, classified based on their binding specificity to cell surface receptors (1). There are more than a dozen closely related IFN alpha subtypes found in both the human and mouse genome, each sharing about 80% amino acid (aa) sequence homology (2, 3). Mature mouse IFNA6 consists of 166 aa and shares 60% aa identity with human IFNA6. The type I IFNs binds to the interferon alpha receptor (IFNAR) which consists of two subunits: IFNAR1 (alpha -subunit) and IFNAR2 (beta -subunit) (4, 5). Individual IFN alpha subtypes are known to display unique efficacies to viral protection, with IFNA6 displaying the superior efficacy controlling influenza virus infection and disease (6). Treatment with IFNA6 DNA 2 weeks post-MCMV infection proved effective at inhibiting the development of chronic autoimmune myocarditis. IFNA6 is also able to reduce chronic cardiac inflammation. These findings suggest that immunomodulation of both antiviral and autoimmune responses by IFN DNA immunization may be an avenue for improved viral immunotherapy (7, 8).

References:

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4. Fung, K.Y. *et al.* (2013) Science **339**:1088.
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7. Bartlett, E.J. *et al.* (2002) Immunol. Cell Biol. **5**:425.
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