

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived mouse IFN-alpha 7/IFNA7 protein
Cys24-Glu190
Accession # P06799

Predicted Molecular Mass 19 kDa

SPECIFICATIONS

SDS-PAGE 18-24 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 ED₅₀ for this effect is <1.5 ng/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.

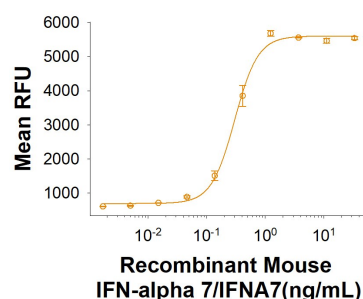
Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

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.

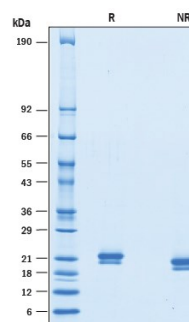
DATA

Bioactivity



Recombinant Mouse IFN-alpha 7/IFNA7 (Catalog # 10208-IJ) suppresses viral activity on L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. The ED₅₀ for this effect is <1.5 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Mouse IFN-alpha J1/IFNA7 (Catalog # 10208-IJ) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 18-24 kDa.

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 IFNA7 consists of 166 aa and shares 59% identity with human IFNA7. The type I IFNs bind 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 IFNA7 showing slightly lower antiviral potency against Mengo virus but maintaining similar anti-proliferative potency in B16 melanoma cells (5, 6).

References:

1. Pestka S, *et al.* (1987) *Annu Rev Biochem.* **56**:727.
2. Matsumiya, T. *et al.* (2007) *J. Immunol.* **179**:4542.
3. Schreiber, G. and J. Piehler (2015) *Trends Immunol.* **36**:139.
4. Fung, K.Y. *et al.* (2013) *Science* **339**:1088.
5. van Pesch, V. *et al.* (2004) *J. Virol.* **78**:8219.
6. James CM *et al.* (2007) *Vaccine.* **25**(10):1856.