

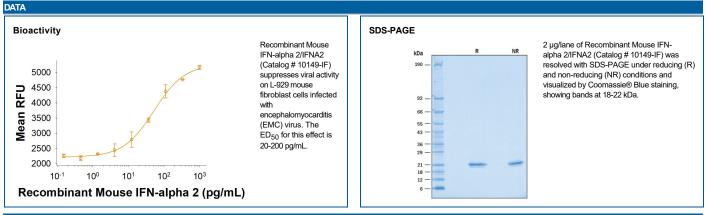
Recombinant Mouse IFN-alpha 2/IFNA2

Catalog Number: 10149-IF

DESCRIPTION	
Source	Human embryonic kidney cell, HEK293-derived mouse IFN-alpha 2/IFNA2 protein Cys24-Glu190 Accession # P01573
N-terminal Sequence Analysis	Cys24
Predicted Molecular	19.3 kDa

SPECIFICATIONS	
SDS-PAGE	18-22 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 20-200 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, -70 °C as supplied.
	 1 month, 2 to 8 °C under sterile conditions after opening.
	 3 months, -20 to -70 °C under sterile conditions after opening.



BACKGROUND

Interferon-alpha 2 (IFN α -2) is one of 14 subtypes within the IFN- α class of Type I Interferons (1). The members of the IFN- α class, also known as alpha leukocyte interferons, encompass a group of distinct but closely related proteins which share approximately 80% amino acid (aa) sequence identity and have a similar globular structure composed of five alpha-helices (1, 3, 4). IFN- α class members signal through a common cell surface receptor complex composed of IFN- α R2 and IFN- α R1 subunits (3). As the first highly active IFN to be cloned and produced, IFN α -2 has become the prototypic IFN for academic and pharmaceutical research (2). The mature extracellular domain (ECD) of mouse IFN α -2 shares 60% and 83% as sequence identity with human and rat, respectively. Murine IFN- α 2 can eliminate cardiac viral load and protect cardiomyocytes from injury in animals infected with coxsackievirus B3 (CVB3) (5). IFN α -2 derived mutants with reduced IFNR2 binding inhibited HIV replication and mutants with more IFNAR1 binding potentiated antiviral activity (6).

References:

- 1. Pestka, S. (2007) J Biol Chem. 282:20047.
- 2. Paul, F. et al. (2015) Gene. 567(2):132.
- 3. Oritani, K. et al. (2001). Cytokine & Growth Factor Reviews, 12:337.
- 4. Pesch, V. et al. (2004). Journal of Virology, 78:8219.
- 5. Wang, Y.X. et al. (2007) Am J Physiol Heart Circ Physiol. 293:H69.
- 6. Schlaepfer, E. et al. (2019) Am Soc for Microbiology 4:e00637.

Rev. 7/29/2019 Page 1 of 1

