

## Recombinant Mouse IFN-alpha 2/IFNA2, Tag Free

### Information

Accession #	P01573
Alternate Names	alpha-2a interferon; Ifa2; IFNA; IFNA2; IFNA2a; IFNA2b; IFNA2c; IFNAA; IFNalpha 2; IFN-alpha 2
Source	Human embryonic kidney cell, HEK293-derived mouse IFN-alpha 2/IFNA2 protein
Protein sequence	Cys24-Glu190
M.Wt	19.4 kDa
Appearance	Solution protein
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.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	The EC50 for this effect is 0.05-0.2 ng/mL. Measured in an anti-viral assay using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

### Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

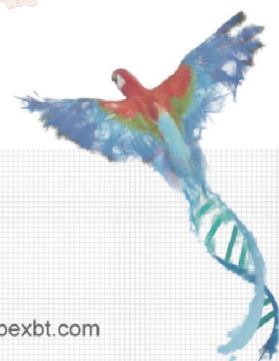
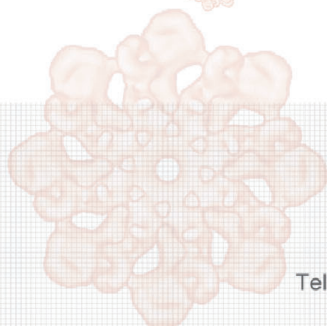
### Description

Interferon-alpha 2 (IFN alpha -2) is one of 14 subtypes within the IFN-alpha class of Type I Interferons <sup>[1]</sup>. The members of the IFN-alpha 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 <sup>[1, 3, 4]</sup>. IFN-alpha class members signal through a common cell surface receptor complex composed of IFN-alpha R2 and IFN-alpha R1 subunits <sup>[3]</sup>. As the first highly active IFN to be cloned and produced, IFN alpha -2 has become the prototypic IFN for academic and pharmaceutical research <sup>[2]</sup>. The mature extracellular domain (ECD) of mouse IFN alpha -2 shares 60% and 83% aa sequence identity with human and rat, respectively. Murine IFN-alpha 2 can eliminate cardiac viral load and protect cardiomyocytes from injury in

animals infected with coxsackievirus B3 (CVB3) [5]. IFN alpha -2 derived mutants with reduced IFNR2 binding inhibited HIV replication and mutants with more IFNAR1 binding potentiated antiviral activity [6].

## Reference

- [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.



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**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)