Data Sheet (Cat.No.TMPY-02526)

TargetMol

interferon alpha 5/IFNA5 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	IFNA5;Ifa5;interferon-α;interferon, alpha 5;interferon, α5
Protein Construction:	A DNA sequence encoding the mouse IFNA5 (NP_034635.2) (Met1-Glu189) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Cys 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q810G2
Molecular Weight:	20.4 kDa (predicted); 23.8 and 22.4 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in antiviral assays using L929 cells infected with vesicular stomatitisvirus (VSV). The ED50 for this effect is 0.02-0.1 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interferon, alpha 5 (IFNA5) belongs to the alpha/beta interferon family. IFNA5 is the only IFNA subtype detected in normal liver, while a mixture of subtypes is observed in the liver tissue of patients with chronic hepatitis C. Interferons are produced by macrophages, IFN-alpha has antiviral activities. Interferon stimulates the production of two enzymes: a protein kinase and an oligoadenylate synthetase. IFN-alpha, the first cytokine to be produced by recombinant DNA technology, has emerged as an important regulator of growth and differentiation, affecting

cellular communication and signal transduction pathways as well as immunological control. Originally discovered as an antiviral substance, the efficacy of IFN-alpha in malignant, viral, immunological, angiogenic, inflammatory, and fibrotic diseases suggests a spectrum of interrelated pathophysiologies. IFN-alpha emerged as a prototypic tumor suppressor protein that represses the clinical tumorigenic phenotype in some malignancies capable of differentiation.

Reference

Lau JY,et al.(1993) Discrepancy between biochemical and virological responses to interferon-alpha in chronic hepatitis C. Lancet. 342(8881): 1208-9.
Gutterman JU. Cytokine therapeutics: lessons from interferon alpha. Proc Natl Acad Sci U S A. 91(4): 1198-205.
Kessler DS,et al.(1990) Interferon-alpha regulates nuclear translocation and DNA-binding affinity of ISGF3, a multimeric transcriptional activator. Genes Dev. 4(10): 1753-65.