Data Sheet (Cat.No.TMPY-03356)

TargetMol

IFN gamma Protein, Mouse, Recombinant

General Information

Synonyms:	IFN γ;interferon, γ;interferon, gamma;Ifg;IFN-g
Protein Construction:	A DNA sequence encoding the mouse IFNG (NP_032363.1) (Met1-Cys155) was expressed and purified. Predicted N terminal: His 23
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P01580
Molecular Weight:	15.5 kDa (predicted); 19.6 and 15.4 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. Immobilized Mouse Interferon Gamma at 2 μg/ml (100 μl/well) can bind Mouse IFNGR1 hFc , the EC50 of Mouse IFNGR1 hFc is7.0-30.0 ng/mL. 2. Measured in antiviral assays using L929 cells infected with vesicular stomatitisvirus (VSV). The ED50 for this effect is 0.05-0.3 ng/mL.
Purity:	> 85 % 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

IFN gamma, also known as IFNG, is a secreted protein that belongs to the type II interferon family. IFN gamma is produced predominantly by natural killer and natural killer T cells as part of the innate immune response, and by

CD4 and CD8 cytotoxic T lymphocyte effector T cells once antigen-specific immunity develops. IFN gamma has antiviral, immunoregulatory, and anti-tumor properties. IFNG, in addition to having antiviral activity, has important immunoregulatory functions, it is a potent activator of macrophages and has antiproliferative effects on transformed cells and it can potentiate the antiviral and antitumor effects of the type I interferons. The IFNG monomer consists of a core of six α-helices and an extended unfolded sequence in the C-terminal region. IFN gamma is critical for innate and adaptive immunity against viral and intracellular bacterial infections and tumor control. Aberrant IFN gamma expression is associated with some autoinflammatory and autoimmune diseases. The importance of IFN gamma in the immune system stems in part from its ability to inhibit viral replication directly, and most importantly from its immunostimulatory and immunomodulatory effects. IFNG also promotes NK cell activity.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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