Data Sheet (Cat.No.TMPY-02354)

TargetMol

IFNGR1 Protein, Mouse, Recombinant (hFc)

General Information

Synonyms:	IFN-gammaR;Ifgr;interferon γ receptor 1;IFN-γR;CD119;Nktar;Ifngr;interferon gamma receptor 1
Protein Construction:	A DNA sequence encoding the mouse IFNGR1 (P15261) extracellular domain (Met 1-Asp 253) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gly 23
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P15261
Molecular Weight:	53 kDa (predicted); 70-75 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized mouse IFNG-His at 10 μg/ml (100 μl/well) can bind mouse IFNGR1-Fc . The EC50 of IFNGR1-Fc is 58.2-135.9 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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then

alters the behavior of the cell. Some CD proteins do not take part in the cell signal process but have other functions such as cell adhesion. CD119 (cluster of differentiation 119), also known as IFNGR1 (interferon-gamma receptor 1), is part of the heterodimeric gamma interferon receptor which consists of IFNGR1 (CD119) and IFNGR2. The IFNGR1 gene encodes the ligand-binding chain (alpha) of the interferon receptor while the IFNGR gene encodes the non-ligand binding partner. The ability of the interferon-γ was achieved through binding to the interferon receptor CD119. After binding, the products of activated T-lymphocytes interferon-γ exerts antiviral activity, growth inhibitory effect, and several immune- regulatory activities on a variety of cell types.

Reference

Zola H,et al.(2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5.
Ho IC,et al.(2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35.
Matesanz-Isabel J,et al.(2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12
Novick D,et al.(1987) The human interferon-gamma receptor. The journal of biological chemistry. 262 (18): 8483-7

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