

Human IFITM3 Protein (Fc Tag)

Catalog Number: 12431-H04H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

1-8U; DSPA2b; IP15; 1110004C05Rik; Cd225; Cdw217; DSPA2b; Fgls; IP15; mil-1

Protein Construction:

A DNA sequence encoding the human IFITM3 (NP_066362.2) (Met1-His57) was expressed, fused with the Fc region of mouse IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 99 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Asp

Molecular Mass:

The recombinant human IFITM3/Fc is a disulfide-linked homodimer. The reduced monomer comprises 293 amino acids and has a predicted molecular mass of 32.9 kDa. The apparent molecular mass of the monomer is approximately 33-45 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

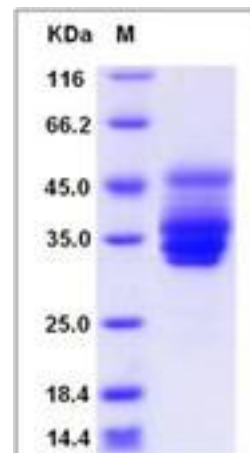
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Interferon-induced transmembrane protein 3 (IFITM3) belongs to the CD225 family. To replicate, viruses must gain access to the host cell's resources. Interferon (IFN) regulates the actions of a large complement of interferon effector genes (IEGs) that prevent viral replication. The interferon inducible transmembrane protein family members, IFITM1, 2 and 3, are IEGs required for inhibition of influenza A virus, dengue virus, and West Nile virus replication in vitro. IFITM3 is an IFN-induced antiviral protein that mediates cellular innate immunity to at least three major human pathogens, namely influenza A H1N1 virus, West Nile virus (WNV), and dengue virus (WNV), by inhibiting the early step(s) of replication. It is both necessary and sufficient for preventing the emergence of viral genomes from the endosomal pathway. Viral pseudoparticles were inhibited from transferring their contents into the host cell cytosol by IFN, and IFITM3 was required and sufficient for this action. IFITM3 overexpression is sufficient for this phenotype. Moreover, IFITM3 partially resides in late endosomal and lysosomal structures, placing it in the path of invading viruses.

References

1. Tanaka SS, *et al.* (2005) IFITM/Mil/fragilis family proteins IFITM1 and IFITM3 play distinct roles in mouse primordial germ cell homing and repulsion. *Dev Cell.* 9(6):745-56.
2. Li D, *et al.* (2011) KLF4-mediated negative regulation of IFITM3 expression plays a critical role in colon cancer pathogenesis. *Clin Cancer Res.* 17(11):3558-68.
3. Lu J, *et al.* (2011) The IFITM proteins inhibit HIV-1 infection. *J Virol.* 85(5):2126-37.

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