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Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP1153a

Specification

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q01628

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 10410

Other Names
Interferon-induced transmembrane protein 3, Dispanin subfamily A member 2b, DSPA2b, Interferon-inducible protein 1-8U, IFITM3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1153a was selected from the N-term region of human IFITM3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Protein Information

Name IFITM3 (HGNC:5414)

Function
IFN-induced antiviral protein which disrupts intracellular cholesterol homeostasis. Inhibits the entry of viruses to the host cell cytoplasm by preventing viral fusion with cholesterol depleted endosomes. May inactivate new enveloped viruses which buds out of the infected cell, by letting them go out with a cholesterol depleted membrane. Active against multiple viruses, including influenza A virus, SARS coronaviruses (SARS-CoV and SARS-CoV-2), Marburg virus (MARV), Ebola virus (EBOV), Dengue virus (DNV), West Nile virus (WNV), human immunodeficiency virus type 1 (HIV-1), hepatitis C virus (HCV) and vesicular stomatitis virus (VSV) (PubMed:26354436, PubMed:<a

href="http://www.uniprot.org/citations/33270927" target="_blank">33270927, PubMed:33239446). Can inhibit: influenza virus hemagglutinin protein- mediated viral entry, MARV and EBOV GP1,2-mediated viral entry, SARS- CoV and SARS-CoV-2 S protein-mediated viral entry and VSV G protein- mediated viral entry (PubMed:33270927). Plays a critical role in the structural stability and function of vacuolar ATPase (v-ATPase). Establishes physical contact with the v-ATPase of endosomes which is critical for proper clathrin localization and is also required for the function of the v-ATPase to lower the pH in phagocytic endosomes thus establishing an antiviral state. In hepatocytes, IFITM proteins act in a coordinated manner to restrict HCV infection by targeting the endocytosed HCV virion for lysosomal degradation (PubMed:26354436). IFITM2 and IFITM3 display anti-HCV activity that may complement the anti-HCV activity of IFITM1 by inhibiting the late stages of HCV entry, possibly in a coordinated manner by trapping the virion in the endosomal pathway and targeting it for degradation at the lysosome (PubMed:26354436). Exerts opposing activities on SARS-CoV-2, including amphipathicity-dependent restriction of virus at endosomes and amphipathicity-independent enhancement of infection at the plasma membrane (PubMed:33270927).

Cellular Location
Cell membrane; Single-pass type II membrane protein. Late endosome membrane; Single-pass type II membrane protein. Early endosome membrane; Single-pass type II membrane protein Lysosome membrane; Single-pass type II membrane protein. Cytoplasm, perinuclear region. Note=Co-localizes with BRI3 isoform 1 at the perinuclear region.

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Images

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - Background

The family of interferon-induced transmembrane protein (Ifitm/mil/fragilis) cell surface proteins may modulate cell adhesion and influence cell differentiation.

Interferon-inducible protein (IFITM3) Antibody (N-term) Blocking peptide - References

Tanaka,S.S., Dev. Cell 9 (6), 745-756 (2005)