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Fagilis (IFITM3) Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1153c

Product Information

Application	WB, E
Primary Accession	Q01628
Other Accession	Q9CQW9, Q99J93, Q01629, P13164
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	14632
Antigen Region	64-93

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	This Fagilis (IFITM3) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 64-93 amino acids from the Central region of human Fagilis (IFITM3).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Fagilis (IFITM3) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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:33239446, PubMed:33270927). 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.

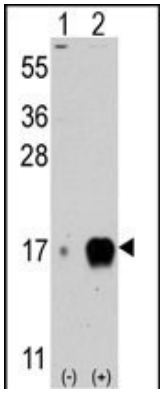
Background

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

References

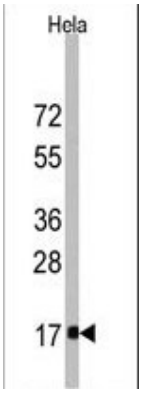
Tanaka,S.S., Dev. Cell 9 (6), 745-756 (2005)

Images



Western blot analysis of IFITM3 (arrow) using rabbit polyclonal IFITM3 Antibody (C-term) (Cat# AP1153c).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the IFITM3 gene (Lane 2) (Origene Technologies).

Western blot analysis of anti-IFITM3 Antibody (Center)



(Cat# AP1153c) in Hela cell line lysates (35ug/lane).
IFITM3(arrow) was detected using the purified Pab.

Citations

- IFITM3 inhibits influenza A virus infection by preventing cytosolic entry.