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Fragilis Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54801

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q01628
Reactivity	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	14632
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Fragilis/IP15
Epitope Specificity	41-100/133
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane; Single-pass type II membrane protein. Late endosome membrane; Single-pass type II membrane protein. Lysosome membrane; Single-pass type II membrane protein.
SIMILARITY	Belongs to the CD225 family.
SUBUNIT	Interacts with SPP1; the interaction reduces OPN expression. Interacts with ATP6V0B and CD81.
Post-translational modifications	Palmitoylation on membrane-proximal cysteines controls clustering in membrane compartments and antiviral activity against influenza virus.Not glycosylated. Polyubiquitinated with both 'Lys-48' and 'Lys-63' linkages. Ubiqutination negatively regulates antiviral activity. Lys-24 is the most prevalent ubiquitination site.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	IFITM3 is a multi-pass membrane protein that belongs to the IFITM (interferon inducible transmembrane) family of proteins. IFITM proteins are induced by type I and type II interferons and contain multiple interferon (IFN)-stimulated response elements (ISREs) in their promoter regions. IFITM proteins play important roles in many cellular processes and their expression requires the presence of the chromatin remodeling SWI/SNF-like BAF complexes. Cellular processes involving IFITM proteins include cellular anti-proliferative activities and homotypic cell adhesion functions of interferons. In addition, IFITM genes are often upregulated in various cancer cells, suggesting a possible role in carcinogenesis. Localizing to the membrane, IFITM3 is a 133 amino acid protein that is induced by IFN-?and IFN-? IFITM3 expression can be regulated by TEF-1, Brg-1 and Sp1.

Additional Information

Gene ID	10410

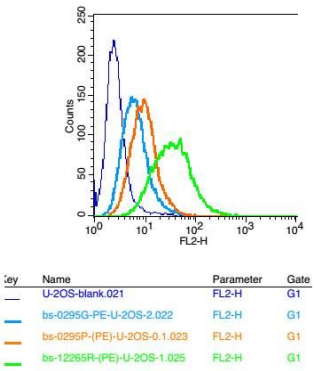
Other Names	Interferon-induced transmembrane protein 3, Dispanin subfamily A member 2b, DSPA2b, Interferon-inducible protein 1-8U, IFITM3
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,Flow-Cyt=1 □g/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

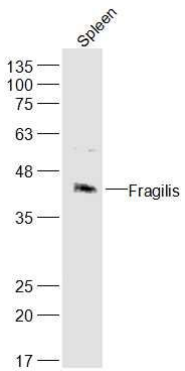
Name	IFITM3 (HGNC:5414)
Function	IFN-induced antiviral protein which disrupts intracellular cholesterol homeostasis. Inhibits the entry of viruses to the host cell cytoplasm by preventing viral fusion with cholesterol depleted endosomes. May inactivate new enveloped viruses which buds out of the infected 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.

Images

Blank control: U-2OS(blue)
Isotype Control Antibody: Rabbit IgG(orange) ;
Secondary Antibody: Goat anti-rabbit IgG-PE(white blue),
Dilution: 1:100 in 1 X PBS containing 0.5% BSA ; Primary



Antibody Dilution: 1 µl in 100 µL1X PBS containing 0.5% BSA(green).



Sample:
Spleen (Mouse) Lysate at 40 ug
Primary: Anti-Fragilis (bs-12256R) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 40 kD
Observed band size: 40 kD