

**IFITM1 Antibody**  
Catalog # ASC11149**Specification****IFITM1 Antibody - Product Information**

Application	WB, ICC, IF
Primary Accession	<a href="#">P13164</a>
Other Accession	<a href="#">NP_003632</a> , <a href="#">150010589</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 14 kDa

Application Notes	<b>Observed: 14 kDa KDa</b> IFITM1 antibody can be used for detection of IFITM1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 20 µg/mL. For immunofluorescence start at 20 µg/mL.
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**IFITM1 Antibody - Additional Information**

Gene ID	8519
Target/Specificity	
IFITM1;	

**Reconstitution & Storage**

IFITM1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

IFITM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**IFITM1 Antibody - Protein Information**

Name IFITM1 ([HGNC:5412](#))

Synonyms CD225, IFI17

**Function**

IFN-induced antiviral protein which inhibits the entry of viruses to the host cell cytoplasm, permitting endocytosis, but preventing subsequent viral fusion and release of viral contents into the cytosol. Active against multiple viruses, including influenza A virus, SARS coronaviruses (SARS-CoV and SARS-CoV-2), Marburg virus (MARV), Ebola virus (EBOV), Dengue virus (DENV), West Nile virus (WNV), human immunodeficiency virus type 1 (HIV-1) and hepatitis C virus (HCV)

(PubMed:<a href="http://www.uniprot.org/citations/26354436" target="\_blank">26354436</a>, PubMed:<a href="http://www.uniprot.org/citations/33270927" target="\_blank">33270927</a>). Can inhibit: influenza virus hemagglutinin protein-mediated viral entry, MARV and EBOV GP1,2-mediated viral entry and SARS-CoV and SARS-CoV-2 S protein-mediated viral entry. Also implicated in cell adhesion and control of cell growth and migration (PubMed:<a href="http://www.uniprot.org/citations/33270927" target="\_blank">33270927</a>). Inhibits SARS-CoV-2 S protein-mediated syncytia formation (PubMed:<a href="http://www.uniprot.org/citations/33051876" target="\_blank">33051876</a>). Plays a key role in the antiproliferative action of IFN-gamma either by inhibiting the ERK activation or by arresting cell growth in G1 phase in a p53-dependent manner. Acts as a positive regulator of osteoblast differentiation. In hepatocytes, IFITM proteins act in a coordinated manner to restrict HCV infection by targeting the endocytosed HCV virion for lysosomal degradation (PubMed:<a href="http://www.uniprot.org/citations/26354436" target="\_blank">26354436</a>). 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:<a href="http://www.uniprot.org/citations/26354436" target="\_blank">26354436</a>).

#### Cellular Location

Cell membrane; Single-pass membrane protein. Lysosome membrane

#### Tissue Location

Bone (at protein level). Levels greatly elevated in colon cancer, cervical cancer, esophageal cancer and ovarian cancer Expressed in glioma cell lines.

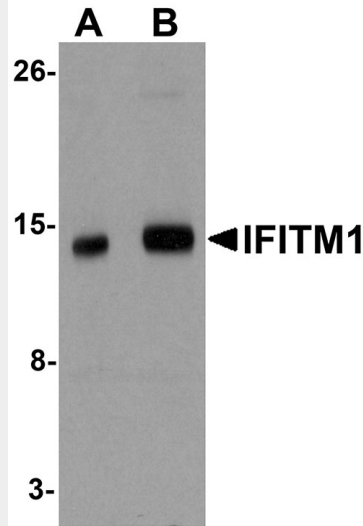
#### IFITM1 Antibody - Protocols

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

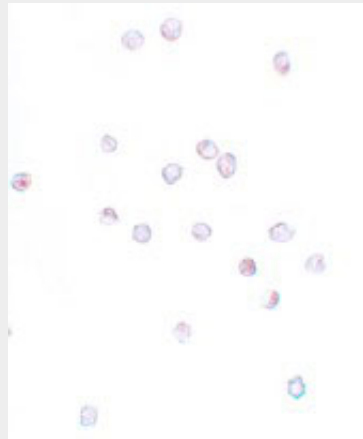
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### IFITM1 Antibody - Images

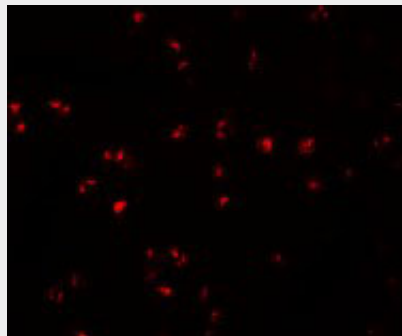




Western blot analysis of IFITM1 in 3T3 cell lysate with IFITM1 antibody at (A) 1 and (B) 2  $\mu\text{g/mL}$ .



Immunocytochemistry of IFITM1 in Jurkat cells with IFITM1 antibody at 20  $\mu\text{g/mL}$ .



Immunofluorescence of IFITM1 in Jurkat cells with IFITM1 antibody at 20  $\mu\text{g/mL}$ .

### **IFITM1 Antibody - Background**

IFITM1 Antibody: IFITM1 (Interferon inducible transmembrane protein 1) is a member of the IFN-inducible transmembrane protein family. It is an essential mediator of interferon-gamma-induced antiproliferation and plays a role in the control of cell growth. IFITM1 is upregulated in several tumor types and may be useful as a tumor biomarker. Both mouse IFITM1 and IFITM3 are expressed on the cell surfaces of primordial germ cells in a developmentally-regulated manner. IFITM1 activity is required for primordial germ cell transit, and IFITM1 acts as a repulsive molecule by repelling non-IFITM1-expressing primordial germ cells from

the mesoderm into the endoderm.

### **IFITM1 Antibody - References**

Deblandre GA, Marinx OP, Evans SS, et al. Expression cloning of an interferon-inducible 17 kDa membrane protein implicated in the control of cell growth. *J. Biol. Chem.* 1995; 270:23860-6.

Yang G, Xu Y, Chen X, et al. IFITM1 plays an essential role in the antiproliferative action of interferon-gamma. *Oncogene.* 2007; 26:594-603.

Akyerli CB, Beksac M, Holko M, et al. Expression of IFITM1 in chronic myeloid leukemia patients. *Leuk. Res.* 2005; 29:283-6.

Tanaka SS, Yamaguchi YL, Tsoi B, et al. IFITM/Mil/Fragilis family proteins IFITM1 and IFITM3 play distinct roles in mouse primordial germ cell homing and repulsion. *Cell* 2005; 9:745-6.