Revision 1

Store at -20C

#13126

IFITM1 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	14	Rabbit	#P13164	8519

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

IFITM1 Antibody recognizes endogenous levels of total IFITM1 protein. This antibody does not cross-react with IFITM2 or IFITM3 proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro20 of human IFITM1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Interferon-induced transmembrane protein (IFITM) family members are composed of short amino- and carboxy-termini, two transmembrane domains, and a cytoplasmic domain (1). There are four family members in humans: IFITM1, IFITM2, IFITM3, and IFITM5 (2,3). Mice have two additional family members, IFITM6 and IFITM7 (2,3). Basal expression of IFITM proteins is observed in some cells and expression can also be induced by type I and type II interferons (4-6). The primary function of IFITM family proteins appears to be viral restriction, as IFITM proteins inhibit cytosolic entry of viruses by preventing fusion of viral and host membranes (7,8). The mechanism by which IFITM proteins inhibit fusion is unclear. Although IFITM proteins are present on both the plasma membrane and intracellular membranes, they most effectively restrict viral fusion in late endosomes and lysosomes (8,9). In addition, different family members exhibit specific viral preferences (9). For example, IFITM3 is most effective at restricting influenza A infection, while IFITM1 is more successful in controlling filoviruses and SARS (9,10).

Background References

1. Diamond, M.S. and Farzan, M. (2013) *Nat Rev Immunol* 13, 46-57.
2. Lange, U.C. et al. (2003) *BMC Dev Biol* 3, 1.
3. Hickford, D. et al. (2012) *BMC Genomics* 13, 155.
4. Reid, L.E. et al. (1989) *Proc Natl Acad Sci U S A* 86, 840-4.
5. Lewin, A.R. et al. (1991) *Eur J Biochem* 199, 417-23.
6. Friedman, R.L. et al. (1984) *Cell* 38, 745-55.
7. Brass, A.L. et al. (2009) *Cell* 139, 1243-54.
8. Feeley, E.M. et al. (2011) *PLoS Pathog* 7, e1002337.
9. Huang, I.C. et al. (2011) *PLoS Pathog* 7, e1001258.
10. Everitt, A.R. et al. (2012) *Nature* 484, 519-23.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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