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IFIT1 Antibody

Catalog # ASC11787

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P09914
Other Accession	NP_001539, 116534937
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	55360
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IFIT1 antibody can be used for detection of IFIT1 by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry at 5 g/mL. For Immunoflorescence start at 20 g/mL.

Additional Information

Gene ID	3434
Other Names	Interferon-induced protein with tetratricopeptide repeats 1, IFIT-1, Interferon-induced 56 kDa protein, IFI-56K, P56, IFIT1, G10P1, IFI56, IFNAI1, ISG56
Target/Specificity	IFIT1; IFIT1 antibody is human, mouse and rat reactive. At least three isoforms of IFIT1 are known to exist. This antibody is predicted to not cross-react with other members of the IFIT protein family.
Reconstitution & Storage	IFIT1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	IFIT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IFIT1 (HGNC:5407)
Function	Plays a key role in the innate immune response as part of an interferon-dependent multiprotein complex, recognizing and sequestering viral RNAs that lack host-specific 2'-O-methylation at their 5' cap. By distinguishing these RNAs from host mRNAs, inhibits their translation by competing with the translation initiation factor eIF4E (PubMed:21642987, PubMed:27240734, PubMed:39009378, PubMed:23334420, PubMed:28251928, PubMed:36285486). Could also prevent viral replication through its interaction with DNA replication origin-binding protein E1 of

	several viruses. Causes the translocation of E1 from the nucleus to the cytoplasm and can also inhibit its helicase activity in vitro (PubMed:19008854, PubMed:21976647). Exhibits antiviral activity against many viruses from the Flaviviridae (West Nile virus, Dengue virus, hepatitis C virus), Coronaviridae (human 229E coronavirus, SARS-CoV-2 and SARS-CoV), Poxviridae (vaccinia virus) and Togaviridae (Sindbis virus) families (PubMed:19008854, PubMed:21976647, PubMed:28251928, PubMed:36285486).
Cellular Location	Cytoplasm

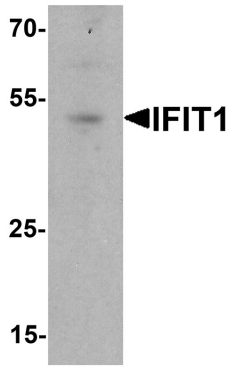
Background

The interferon-induced protein with tetratricopeptide repeats 1 (IFIT1) protein is a member of a family of tetratricopeptide repeat-containing proteins whose transcription is upregulated by interferons, virus infection, and molecular patterns such as dsRNA or lipopolysaccharides (1,2). These proteins have been suggested to induce anti-viral cellular activities in response to infection (2). Together with the interferon-induced transmembrane protein 1 (IFITM1), IFIT1 inhibits the replication of the Hepatitis C virus, suggesting that it may be useful in the development of therapeutic treatments (3).

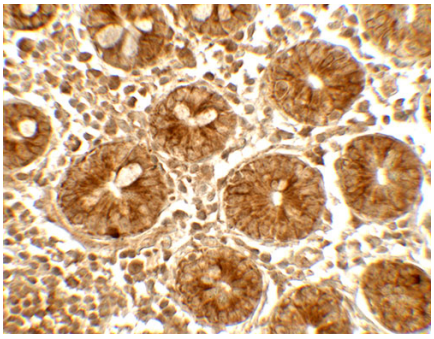
References

Wathelet M, Moutschen S, Defilippi P, et al. Molecular cloning, full-length sequence and preliminary characterization of a 56-kDa protein induced by human interferons. Eur. J. Biochem. 1986; 155:11-7.
Fensterl V and Sen GC. The ISG56/IFIT1 gene family. J. Interferon Cytokine Res. 2011; 31:71-8.
Raychoudhuri A, Shrivastava S, Steele R, et al. ISG56 and IFITM1 proteins inhibit hepatitis C virus replication. J. Virol. 2011; 85:12881-9.

Images

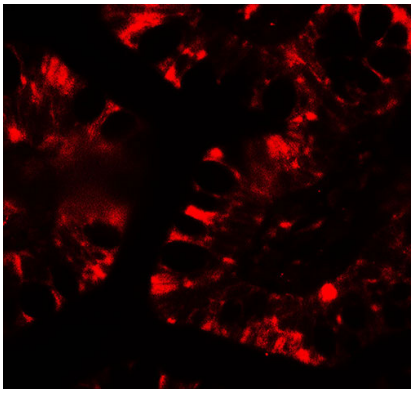


Western blot analysis of IFIT1 in rat small intestine tissue lysate with IFIT1 antibody at 1 µg/ml.



Immunohistochemistry of IFIT1 in human small intestine tissue with IFIT1 antibody at 5 µg/mL.

Immunofluorescence of IFIT1 in human small intestine tissue with IFIT1 antibody at 20 µg/mL.



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