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IFIT1 Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI16108

Product Information

Application	WB
Primary Accession	P09914
Other Accession	NP_001539
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55360

Additional Information

Gene ID	3434
Alias Symbol	IFIT1, G10P1, IFI56, IFNAI1, ISG56,
Other Names	Interferon-induced protein with tetratricopeptide repeats 1, IFIT-1, Interferon-induced 56 kDa protein, IFI-56K, P56, IFIT1, G10P1, IFI56, IFNAI1, ISG56
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 &mu, l of distilled water. Final Anti-IFIT1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	IFIT1 Antibody - C-terminal region 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

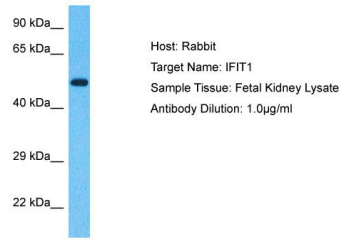
Background

Interferon-induced antiviral RNA-binding protein that specifically binds single-stranded RNA bearing a 5'-triphosphate group (PPP-RNA), thereby acting as a sensor of viral single- stranded RNAs and inhibiting expression of viral messenger RNAs. Single-stranded PPP-RNAs, which lack 2'-O-methylation of the 5' cap and bear a 5'-triphosphate group instead, are specific from viruses, providing a molecular signature to distinguish between self and non-self mRNAs by the host during viral infection. Directly binds PPP-RNA in a non-sequence-specific manner. Viruses evolved several ways to evade this restriction system such as encoding their own 2'-O-methylase for their mRNAs or by stealing host cap containing the 2'-O-methylation (cap snatching mechanism). Exhibits antiviral activity against several viruses including human papilloma and hepatitis C viruses.

References

Wathelet M.,et al.Eur. J. Biochem. 155:11-17(1986).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Deloukas P.,et al.Nature 429:375-381(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



Host: Rabbit
Target Name: IFIT1
Sample Tissue: Fetal Kidney lysates
Antibody Dilution: 1.0µg/ml