

IFI-56K Polyclonal Antibody

Catalog # AP70458

## Specification

# IFI-56K Polyclonal Antibody - Product Information

Application	WB, IHC-P
Primary Accession	<u>P09914</u>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

## IFI-56K Polyclonal Antibody - Additional Information

Gene ID 3434

**Other Names** IFIT1; G10P1; IFI56; IFNAI1; ISG56; Interferon-induced protein with tetratricopeptide repeats 1; IFIT-1; Interferon-induced 56 kDa protein; IFI-56K; P56

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications. IHC-P~~N/A

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions -20°C

# IFI-56K Polyclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/21642987" target="\_blank">21642987</a>, PubMed:<a href="http://www.uniprot.org/citations/27240734" target="\_blank">27240734</a>, PubMed:<a href="http://www.uniprot.org/citations/39009378" target="\_blank">39009378</a>, PubMed:<a href="http://www.uniprot.org/citations/23334420" target="\_blank">23334420</a>, PubMed:<a href="http://www.uniprot.org/citations/28251928" target="\_blank">28251928</a>, PubMed:<a href="http://www.uniprot.org/citations/28251928" target="\_blank">36285486</a>, PubMed:<a href="http://www.uniprot.org/citations/36285486" target="\_blank">36285486</a>). 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:<a href="http://www.uniprot.org/citations/19008854"



target="\_blank">19008854</a>, PubMed:<a href="http://www.uniprot.org/citations/21976647" target="\_blank">21976647</a>). 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:<a href="http://www.uniprot.org/citations/19008854" target="\_blank">19008854</a>, PubMed:<a href="http://www.uniprot.org/citations/21976647" target="\_blank">21976647</a>, PubMed:<a href="http://www.uniprot.org/citations/21976647" target="\_blank">21976647</a>, PubMed:<a href="http://www.uniprot.org/citations/28251928" target="\_blank">28251928</a>, PubMed:<a href="http://www.uniprot.org/citations/28251928" target="\_blank">36285486</a>).

Cellular Location Cytoplasm

## IFI-56K Polyclonal Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>
- IFI-56K Polyclonal Antibody Images





# IFI-56K Polyclonal Antibody - 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.