

Rabbit Anti-IFIT1 [MD54R]: RM0418, RM0418RTU7

Intended Use: For Research Use Only

Description: IFIT1, also known as GARG-16, Glucocorticoid-attenuated response gene 16 protein or Interferon-induced 56 kDa protein, IFI-56K, or P56, and encoded by the gene Ifit1/Garg16, Ifi56, Isg56, is an 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. IFIT1 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). IFIT1 is a component of an interferon-dependent multiprotein complex that is at least composed of IFIT1, IFIT2 and IFIT3 and interacts with EIF3F, RPL15, TMEM173 and EEF1A1 and is important in antiviral defense, and innate immune response. IFIT1 is localized to the cytoplasm and expressed by most cells, particularly in the immune system and epithelial cells.

Specifications

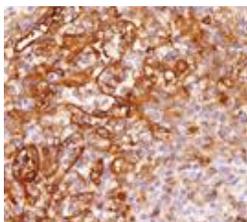
Clone: MD54R
 Source: Rabbit
 Reactivity: Human
 Isotype: IgG
 Localization: Cytoplasm
 Formulation: Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
 Storage: Store at 2°- 8°C
 Applications: IHC, IP, WB
 Package:

Description	Catalog No.	Size
IFIT1 Concentrated	RM0418	1 ml
IFIT1 Prediluted	RM0418RTU7	7 ml

IHC Procedure*

Positive Control Tissue: Spleen
 Concentrated Dilution: 50-200
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human spleen stained with anti-IFIT1 using DAB

References:

1. Vaccinia Virus Protein C6 Inhibits Type I IFN Signalling in the Nucleus and Binds to the Transactivation Domain of STAT2. Stuart JH, et al. PLoS Pathog 12:e1005955, 2016.
2. The differential activity of interferon-α subtypes is consistent among distinct target genes and cell types. Moll HP, et al. Cytokine 53:52-9, 2011.
3. Absent in Melanoma 2 (AIM2) is an important mediator of interferon-dependent and -independent HLA-DRA and HLA-DRB gene expression in colorectal cancers. Lee J, et al. Oncogene : 2011.