

**VISA Antibody**  
**Catalog # ASC10507**

## Specification

## VISA Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	<a href="#">Q7Z434</a>
Other Accession	<a href="#">NP_065797</a> , <a href="#">83776598</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	VISA antibody can be used for detection of VISA by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

## VISA Antibody - Additional Information

Gene ID	57506
Other Names	VISA Antibody: IPS1, VISA, IPS-1, CARDIF, IPS1, KIAA1271, Mitochondrial antiviral-signaling protein, CARD adapter inducing interferon beta, MAVS, mitochondrial antiviral signaling protein

## Target/Specificity

MAVS;

## Reconstitution & Storage

VISA antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

## Precautions

VISA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## VISA Antibody - Protein Information

**Name** MAVS {ECO:0000303|PubMed:16125763, ECO:0000312|HGNC:HGNC:29233}

## Function

Adapter required for innate immune defense against viruses (PubMed:<a href="http://www.uniprot.org/citations/16125763" target="\_blank">16125763</a>, PubMed:<a href="http://www.uniprot.org/citations/16127453" target="\_blank">16127453</a>, PubMed:<a href="http://www.uniprot.org/citations/16153868" target="\_blank">16153868</a>, PubMed:<a href="http://www.uniprot.org/citations/16177806" target="\_blank">16177806</a>, PubMed:<a href="http://www.uniprot.org/citations/19631370" target="\_blank">19631370</a>, PubMed:<a href="http://www.uniprot.org/citations/20451243" target="\_blank">20451243</a>, PubMed:<a

[23087404](http://www.uniprot.org/citations/23087404), PubMed: [20127681](http://www.uniprot.org/citations/20127681), PubMed: [21170385](http://www.uniprot.org/citations/21170385), PubMed: [27992402](http://www.uniprot.org/citations/27992402), PubMed: [33139700](http://www.uniprot.org/citations/33139700), PubMed: [37582970](http://www.uniprot.org/citations/37582970)). Acts downstream of DHX33, RIGI and IFIH1/MDA5, which detect intracellular dsRNA produced during viral replication, to coordinate pathways leading to the activation of NF-kappa-B, IRF3 and IRF7, and to the subsequent induction of antiviral cytokines such as IFNB and RANTES (CCL5) (PubMed: [16125763](http://www.uniprot.org/citations/16125763), PubMed: [16127453](http://www.uniprot.org/citations/16127453), PubMed: [16153868](http://www.uniprot.org/citations/16153868), PubMed: [16177806](http://www.uniprot.org/citations/16177806), PubMed: [19631370](http://www.uniprot.org/citations/19631370), PubMed: [20451243](http://www.uniprot.org/citations/20451243), PubMed: [23087404](http://www.uniprot.org/citations/23087404), PubMed: [25636800](http://www.uniprot.org/citations/25636800), PubMed: [20127681](http://www.uniprot.org/citations/20127681), PubMed: [21170385](http://www.uniprot.org/citations/21170385), PubMed: [20628368](http://www.uniprot.org/citations/20628368), PubMed: [33110251](http://www.uniprot.org/citations/33110251), PubMed: [27736772](http://www.uniprot.org/citations/27736772)). Peroxisomal and mitochondrial MAVS act sequentially to create an antiviral cellular state (PubMed: [20451243](http://www.uniprot.org/citations/20451243)). Upon viral infection, peroxisomal MAVS induces the rapid interferon-independent expression of defense factors that provide short-term protection, whereas mitochondrial MAVS activates an interferon-dependent signaling pathway with delayed kinetics, which amplifies and stabilizes the antiviral response (PubMed: [20451243](http://www.uniprot.org/citations/20451243)). May activate the same pathways following detection of extracellular dsRNA by TLR3 (PubMed: [16153868](http://www.uniprot.org/citations/16153868)). May protect cells from apoptosis (PubMed: [16125763](http://www.uniprot.org/citations/16125763)). Involved in NLRP3 inflammasome activation by mediating NLRP3 recruitment to mitochondria (PubMed: [23582325](http://www.uniprot.org/citations/23582325)).

### Cellular Location

Mitochondrion outer membrane; Single-pass membrane protein. Mitochondrion. Peroxisome

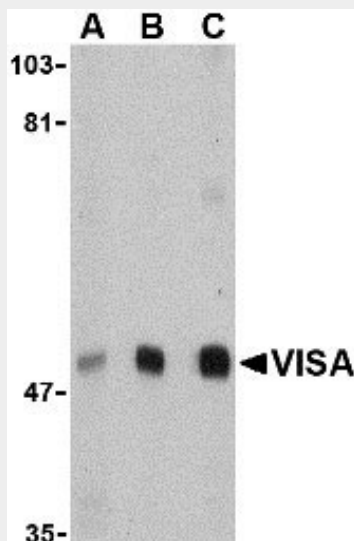
### Tissue Location

Present in T-cells, monocytes, epithelial cells and hepatocytes (at protein level). Ubiquitously expressed, with highest levels in heart, skeletal muscle, liver, placenta and peripheral blood leukocytes.

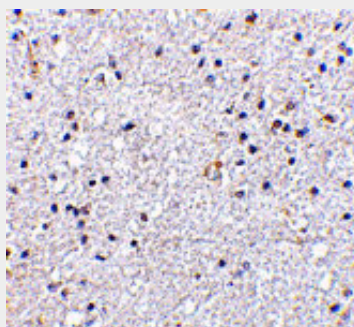
### VISA Antibody - Protocols

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

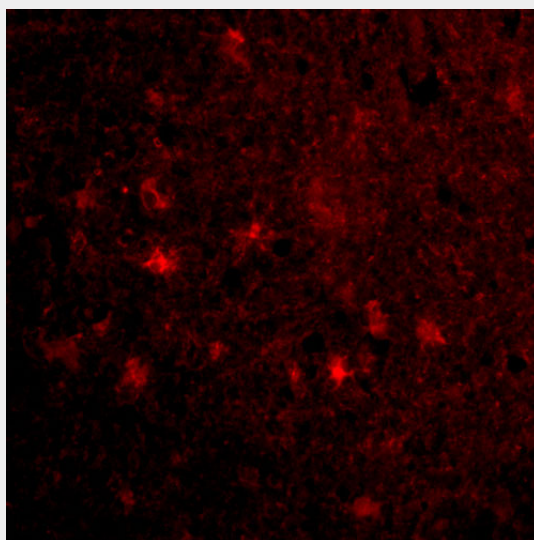
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**VISA Antibody - Images**

Western blot analysis of VISA in A20 cell lysate with VISA antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemistry of VISA in human brain tissue with VISA antibody at 5 µg/mL.



Immunofluorescence of VISA in Human Brain cells with VISA antibody at 20 µg/mL.

**VISA Antibody - Background**

VISA Antibody: Two distinct signaling pathways activate the host innate immunity against viral infection. One pathway is reliant on members of the Toll-like receptor (TLR) family while the other uses the RNA helicase RIG-I as a receptor for intracellular viral double-stranded RNA as a trigger for the immune response. VISA is a mitochondrial membrane protein that was identified as a critical component in the IFN- $\beta$  signaling pathways that recruits IRF-3 to RIG-I, leading to its activation and that of NF- $\kappa$ B. VISA is also thought to interact with other components of the innate immune pathway such as the TLR adapter protein TRIF, TRAF2 and TRAF6. VISA also interacts with the IKK $\alpha$ , IKK $\beta$  and IKK $\epsilon$  kinases through its C-terminal region. Cleavage of this region by the Hepatitis C virus (HCV) protease allows HCV to escape the host immune system. At least three isoforms of VISA are known to exist.

#### **VISA Antibody - References**

Seth RB, Sun L, and Chen ZJ. Antiviral innate immunity pathways. Cell Res.2006; 16:141-7.  
Xu LG, Wang YY, Han KJ, et al. VISA is an adapter protein required for virus-triggered IFN-beta signaling. Mol. Cell2005; 19:727-40.  
Meylan E, Curran J, Hofman K, et al. Cardif is an adaptor protein in the RIG-I antiviral pathway and is targeted by hepatitis C virus. Nature2005; 1167-72.