

OAS1 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6226a

Specification

OAS1 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	P00973
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	302-330

OAS1 Antibody (C-term) - Additional Information

Gene ID 4938

Other Names

2'-5'-oligoadenylate synthase 1, (2-5')oligo(A) synthase 1, 2-5A synthase 1, E18/E16, p46/p42 OAS, OAS1, OIAS

Target/Specificity

This OAS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 302-330 amino acids from the C-terminal region of human OAS1.

Dilution

WB~~1:1000
IHC-P~~1:10~50
E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

OAS1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

OAS1 Antibody (C-term) - Protein Information

Name OAS1

Synonyms OIAS

Function Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response (PubMed:[34581622](#)). In addition, it may also play a role in other cellular processes such as apoptosis, cell growth, differentiation and gene regulation. Synthesizes higher oligomers of 2'-5'-oligoadenylates (2-5A) from ATP which then bind to the inactive monomeric form of ribonuclease L (RNase L) leading to its dimerization and subsequent activation. Activation of RNase L leads to degradation of cellular as well as viral RNA, resulting in the inhibition of protein synthesis, thus terminating viral replication (PubMed:[34145065](#), PubMed:[34581622](#), PubMed:[40010341](#)). Involved in intercellular immune signaling that limits local spread of RNA virus infection and protects against tumorigenesis (PubMed:[40010341](#)). Can generate high levels of 2',5'- oligoadenylates in transformed cells, targeting them to innate and adaptive immunosurveillance mechanisms (PubMed:[40010341](#)). Can mediate the antiviral effect via the classical RNase L-dependent pathway or an alternative antiviral pathway independent of RNase L. The secreted form displays antiviral effect against vesicular stomatitis virus (VSV), herpes simplex virus type 2 (HSV-2), and encephalomyocarditis virus (EMCV) and stimulates the alternative antiviral pathway independent of RNase L.

Cellular Location

Cytoplasm. Mitochondrion. Nucleus. Microsome Endoplasmic reticulum. Secreted {ECO:0000250|UniProtKB:Q29599}. Note=Associated with different subcellular fractions such as mitochondrial, nuclear, and rough/smooth microsomal fractions. [Isoform p42]: Note=(Microbial infection) In SARS coronavirus-2/SARS-CoV-2 infected cells, since its not prenylated, is diffusely localized and unable to initiate a detectable block to SARS- CoV-2 replication.

Tissue Location

Expressed in lungs..

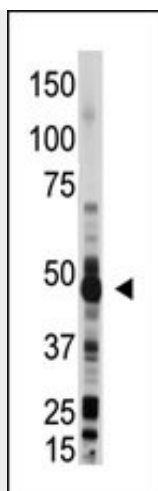
OAS1 Antibody (C-term) - Protocols

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

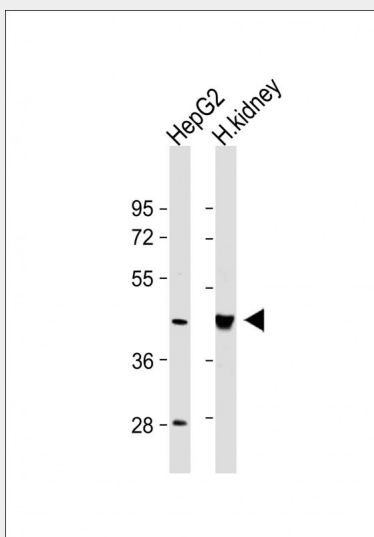
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

OAS1 Antibody (C-term) - Images

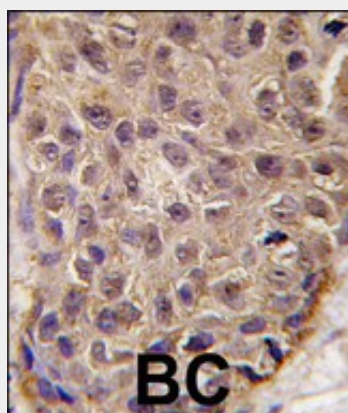




The anti-OAS1 Pab (Cat. #AP6226a) is used in Western blot to detect OAS1 in mouse liver lysate.



All lanes : Anti-OAS1 Antibody (C-term) at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Human kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDm/TBST.



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with OAS1 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

OAS1 Antibody (C-term) - Background

OAS1 is an interferon inducible protein that may play a role in mediating resistance to virus infection, control of cell growth, differentiation, and apoptosis. It binds double-stranded RNA and polymerizes ATP into PPP(A2'P5'A)N oligomers, which activate the latent RNase L that, when activated, cleaves single-stranded RNAs. This protein is associated with different subcellular fractions such as mitochondrial, nuclear, and rough/smooth microsomal fractions.

OAS1 Antibody (C-term) - References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Sarkar, S.N., et al., J. Biol. Chem. 274(36):25535-25542 (1999).
Ghosh, A., et al., J. Biol. Chem. 272(52):33220-33226 (1997).
Ghosh, S.K., et al., J. Biol. Chem. 266(23):15293-15299 (1991).
Rutherford, M.N., et al., EMBO J. 7(3):751-759 (1988).

OAS1 Antibody (C-term) - Citations

- [Azithromycin induces anti-viral responses in bronchial epithelial cells.](#)
- [The hepatitis C virus non-structural NS5A protein impairs both the innate and adaptive hepatic immune response in vivo.](#)
- [Therapeutic gene silencing delivered by a chemically modified small interfering RNA against mutant SOD1 slows amyotrophic lateral sclerosis progression.](#)
- [A phylogenetically conserved RNA structure in the poliovirus open reading frame inhibits the antiviral endoribonuclease RNase L.](#)
- [IFI16 in human prostate cancer.](#)
- [Cytomegalovirus induces interferon-stimulated gene expression and is attenuated by interferon in the developing brain.](#)
- [Activation of anti-hepatitis C virus responses via Toll-like receptor 7.](#)