

# OAS1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6226a

## Product Information

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<b>Application</b>	WB, IHC-P, E
<b>Primary Accession</b>	<a href="#">P00973</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Calculated MW</b>	46029
<b>Antigen Region</b>	302-330

## Additional Information

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<b>Gene ID</b>	4938
<b>Other Names</b>	2'-5'-oligoadenylate synthase 1, (2-5')oligo(A) synthase 1, 2-5A synthase 1, E18/E16, p46/p42 OAS, OAS1, OIAS
<b>Target/Specificity</b>	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.
<b>Dilution</b>	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	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.
<b>Storage</b>	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.
<b>Precautions</b>	OAS1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	OAS1
<b>Synonyms</b>	OIAS
<b>Function</b>	Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response (PubMed: <a href="#">34581622</a> ). 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](#)). 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..

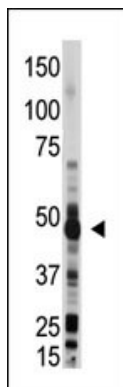
## Background

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.

## References

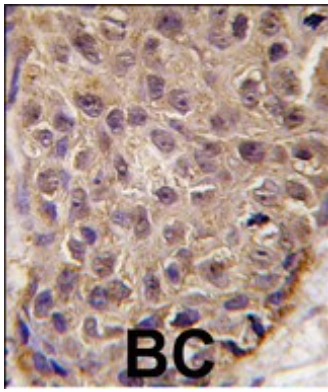
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).  
Sarkar, S.N., et al., J. Biol. Chem. 274(36):25535-25542 (1999).  
Ghosh, A., et al., J. Biol. Chem. 272(52):33220-33226 (1997).  
Ghosh, S.K., et al., J. Biol. Chem. 266(23):15293-15299 (1991).  
Rutherford, M.N., et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

## Images



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

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.

## Citations

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- [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.](#)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.