10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

OAS1 Rabbit pAb

Catalog # AP99884

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P00973
Other Accession	P00973
Reactivity	Human
Predicted	Pig, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46029
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OAS1
Epitope Specificity	1-100/400
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the 2-5A synthase family.
SUBUNIT	Monomer. Homotetramer.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This protein is an enzyme included in the 2', 5' oligoadenylate synthase family. This enzyme is induced by interferons and catalyzes the 2', 5' oligomers of adenosine in order to bind and activate RNase L. This enzyme family plays a significant role in the inhibition of cellular protein synthesis and viral infection resistance.

Additional Information

Gene ID	4938
Other Names	E18/E16; IFI-4; IMD100; OIAS; OIASI; Oas1; Oas1g; OAS1_HUMAN; (2-5')oligo(A) synthase 1; 2-5A synthase 1; p46/p42 OAS; 2.7.7.84; OAS1A_MOUSE; Oas1a; (2-5')oligo(A) synthase 1A; 2-5A synthase 1A; p42 OAS; Oias1; OAS1_PIG; OAS1A_RAT; 2'-5'-oligoadenylate synthetase 1; 2', 5'-oligoadenylate synthetase 1 (40-46 kD); 2'-5'-oligoadenylate synthetase 1, 40/46kDa; 2'-5' oligoadenylate synthase 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug /Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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. Catalyzes the formation of 2'-5'-oligoadenylates (2- 5A) from polymerization of 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 immunesurveillance 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..

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