OAS1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	OAS1, Polyclonal Antibody
Full Product Name	OAS1, CT (OAS1, OIAS, 2'-5'-oligoadenylate synthase 1, E18/E16, p46/p42 OAS) (MaxLight 405)
Product Gene Name	anti-OAS1 antibody
Product Synonym Names	OAS1; OIAS; 2'-5'-oligoadenylate synthase 1; E18/E16; p46/p42 OAS
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	400
OMIM	164350
3D Structure	ModBase 3D Structure for P00973
Immunogen	OAS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 309~339 amino acids selected from the C-terminal region of human OAS1.
Conjugate	MaxLight405
Note	Preservative Free
Product Categories/Family for anti-OAS1 antibody	Antibodies; Enzymes; Synthase
Applications Tested/Suitable for anti-OAS1 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-OAS1 antibody	IHC: 1:10-50 FLISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-OAS1 antibody	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.
Product References and Citations for anti-OAS1 antibody	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).

Other Notes	Small volumes of anti-OAS1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for OAS1 purchase	MBS6327474 is an antibody targeting OAS1. Also known as OAS1, CT (OAS1, OIAS, 2'-5'-oligoadenylate synthase 1, E18/E16, p46/p42 OAS) (MaxLight 405). Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for OAS1. It may not necessarily be applicable to this product.

NCBI GI #	296439492
NCBI GeneID	4938
NCBI Accession #	P00973.4
UniProt Primary Accession #	P00973
UniProt Secondary Accession #	P04820; P29080; P29081; P78485; P78486; Q16700; Q16701; Q1PG42; Q3ZM01; Q53GC5; A8K4N8
UniProt Related Accession #	P00973
NCBI Official Full Name	2'-5'-oligoadenylate synthase 1
NCBI Official Synonym Full Names	2'-5'-oligoadenylate synthetase 1, 40/46kDa
NCBI Official Symbol	OAS1
NCBI Official Synonym Symbols	OIAS; IFI-4; OIASI
UniProt Protein Name	2'-5'-oligoadenylate synthase 1
UniProt Synonym Protein Names	E18/E16; p46/p42 OAS
Protein Family	2'-5'-oligoadenylate synthase
UniProt Gene Name	OAS1
UniProt Synonym Gene Names	OIAS; (2-5')oligo(A) synthase 1; 2-5A synthase 1
UniProt Entry Name	OAS1_HUMAN
NCBI Protein Information	2'-5'-oligoadenylate synthase 1; E18/E16; p46/p42 OAS; 2-5A synthase 1; 2-5A synthetase 1; (2-5')oligo(A) synthase 1; 2',5'-oligo A synthetase 1; (2-5')oligo(A) synthetase 1; 2'-5'-oligoisoadenylate synthetase 1; 2',5'-oligoadenylate synthetase 1, 40/46kD
NCBI Summary for OAS1	This gene encodes a member of the 2-5A synthetase family, essential proteins involved in the innate immune response to viral infection. The encoded protein is induced by interferons and uses adenosine triphosphate in 2'-specific nucleotidyl transfer reactions to synthesize 2',5'-oligoadenylates (2-5As). These molecules activate latent RNase L, which results in viral RNA degradation and the inhibition of viral replication. The three known members of this gene family are located in a cluster on chromosome 12. Mutations in this gene have been associated with host susceptibility to viral infection. Alternatively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq, Jul 2008]

UniProt Comments for OAS1	OAS1: Interferon-induced, dsRNA-activated antiviral enzyme which plays a critical role in cellular innate antiviral response. 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. 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. Belongs to the 2-5A synthase family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Transferase; EC 2.7.7.84 Chromosomal Location of Human Ortholog: 12q24.2 Cellular Component: mitochondrion; endoplasmic reticulum; cytoplasm; extracellular region; cytosol; nucleus Molecular Function: protein binding; zinc ion binding; metal ion binding; double-stranded RNA binding; ATP binding; 2'-5'-oligoadenylate synthetase activity Biological Process: negative regulation of viral genome replication; response to virus; cytokine and chemokine mediated signaling pathway; glucose metabolic process; purine nucleotide biosynthetic process; glucose homeostasis; defense response to virus; protein oligomerization Disease: Diabetes Mellitus, Insulin-dependent
Research Articles on OAS1	**1.** protein expression is inhibited by hepatitis C virus
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