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OAS3 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6228a

Product Information

Application	WB, E
Primary Accession	Q9Y6K5
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1945
Calculated MW	121170
Antigen Region	1056-1087

Additional Information

Gene ID	4940
Other Names	2'-5'-oligoadenylate synthase 3, (2-5')oligo(A) synthase 3, 2-5A synthase 3, p100 OAS, p100OAS, OAS3
Target/Specificity	This OAS3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1056-1087 amino acids from the C-terminal region of human OAS3.
Dilution	WB~~1:1000 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	OAS3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	OAS3
Function	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 preferentially dimers 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. Displays antiviral activity against Chikungunya virus (CHIKV), Dengue virus, Sindbis virus (SINV) and Semliki forest virus (SFV).

Cellular Location Cytoplasm. Nucleus.

Tissue Location Present at high level in placenta trophoblast.

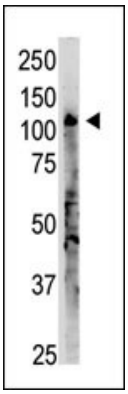
Background

OAS3 is an interferon inducible protein that belongs to the 2-5A synthetase family, may play a role in mediating resistance to virus infection, control of cell growth, differentiation, and apoptosis. OAS3 synthesizes preferentially dimeric 2',5'-oligoadenylate molecules. GTP can be an alternative substrate. OAS3 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. The protein is present at high level in placenta trophoblast.

References

Ito, M., et al., Cancer Res. 61(5):2038-2046 (2001). Rebouillat, D., et al., Genomics 70(2):232-240 (2000). Rebouillat, D., et al., J. Biol. Chem. 274(3):1557-1565 (1999).

Images



The anti-OAS3 C-term Antibody (Cat.#AP6228a) is used in Western blot to detect OAS3 in A375 lysate.

Citations

- The 2\'-5\' oligoadenylate synthetase 3 (OAS3) enzyme potently synthesizes the 2\'-5\' oligoadenylates required for RNase L activation.