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SARS virus EnvE Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6007a

Product Information

Application	E
Primary Accession	P59637
Reactivity	SARS
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3791/3792
Calculated MW	8361
Antigen Region	47-76

Additional Information

Other Names	Envelope small membrane protein, E protein, sM protein, E, sM
Target/Specificity	This SARS virus EnvE antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 47~76 amino acids from the C-terminus region of SARS EnvE protein.
Dilution	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	SARS virus EnvE Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	E {ECO:0000255|HAMAP-Rule:MF_04204}
Synonyms	sM
Function	Plays a central role in virus morphogenesis and assembly. Acts as a viroporin and self-assembles in host membranes forming pentameric protein-lipid pores that allow ion transport. Also plays a role in the induction of apoptosis (By similarity). Activates the host NLRP3 inflammasome, leading to IL-1beta overproduction.

Cellular Location	Host endoplasmic reticulum-Golgi intermediate compartment. Host Golgi apparatus membrane {ECO:0000255|HAMAP-Rule:MF_04204, ECO:0000269|PubMed:21450821, ECO:0000269|PubMed:24788150}; Single-pass type III membrane protein {ECO:0000255|HAMAP-Rule:MF_04204}. Note=Colocalizes with S in the host endoplasmic reticulum-Golgi intermediate compartment (PubMed:20861307) The cytoplasmic tail functions as a Golgi complex-targeting signal {ECO:0000255|HAMAP-Rule:MF_04204, ECO:0000269|PubMed:20861307, ECO:0000269|PubMed:21450821}

Background

An outbreak of atypical pneumonia, referred to as severe acute respiratory syndrome (SARS) and first identified in Guangdong Province, China, has spread to several countries. The severity of this disease is such that the mortality rate appears to be ~3 to 6%. A number of laboratories worldwidehave undertaken the identification of the causative agent. The National Microbiology Laboratory in Canada obtained the Tor2 isolate from a patient in Toronto, and succeeded in growing a coronavirus-like agent in African Green Monkey Kidney (Vero E6) cells. This coronavirus has been named publicly by the World Health Organization and member laboratories as ?SARS virus? The SARS membrane proteins, including the major proteins S (Spike) and M (Membrane), are inserted into the endoplasmic reticulum Golgi intermediate compartment (ERGIC) while full length replicated RNA (+ strands) assemble with the N (nucleocapsid) protein. The virus then migrates through the Golgi complex and eventually exits the cell, likely by exocytosis. The site of viral attachment to the host cell resides within the S protein. Oligomeric spike (S) glycoproteins extend from SARS membranes. These integral membrane proteins assemble within the endoplasmic reticulum of infected cells and are subsequently endoproteolyzed in the Golgi, generating noncovalently associated S1 and S2 fragments. Once on the surface of infected cells and virions, peripheral S1 fragments bind carcinoembryonic antigen-related cell adhesion molecule (CEACAM) receptors, and this triggers membrane fusion reactions mediated by integral membrane S2 fragments.

References

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Shen, X., et al., Acta Pharmacol Sin 24(6):505-511 (2003).
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