SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Rabbit Anti-E1 glycoprotein/AF594 Conjugated antibody

Catalog Number: SL0319R-AF594

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-E1 glycoprotein/AF594
Immunogen:	KLH conjugated synthetic peptide derived from human Glycoprotein
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Rubella virus)
Background:	**Function:** Capsid protein interacts with genomic RNA and assembles into icosaedric core particles. The resulting nucleocapsid eventually associates with the cytoplasmic domain of E2 at the cell membrane, leading to budding and formation of mature virions. Phosphorylation negatively regulates RNA-binding activity, possibly delaying virion assembly during the viral replication phase. Capsid protein dimerizes and becomes disulfide-linked in the virion, but this interaction seems not to be important for its biological function. Modulates genomic RNA replication. Modulates subgenomic RNA synthesis by interacting with human C1QBP/SF2P32. Induces both perinuclear clustering of mitochondria and the formation of electron-dense intermitochondrial plaques, both hallmarks of rubella virus infected cells. Induces apoptosis when expressed in transfected cells. E2 envelope glycoprotein is responsible for viral attachment to target host cell, by binding to the cell receptor. Its transport to the plasma membrane depends on interaction with E1 protein.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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	E1 envelope glycoprotein is a class II viral fusion protein. Fusion activity is inactive as long as E1 is bound to E2 in mature virion. After virus attachment to target cell and clathrin-mediated endocytosis, acidification of the endosome would induce dissociation of E1/E2 heterodimer and concomitant trimerization of the E1 subunits. This E1 homotrimer is fusion active, and promotes release of viral nucleocapsid in cytoplasm after endosome and viral membrane fusion (By similarity). E1 cytoplasmic tail modulates virus release, and the tyrosines residues are critical for this function. **Subunit:** Capsid protein homooligomerizes. Forms a dimer shortly after synthesis, this dimer become disulfide-linked in the virion. Interacts with human C1QBP. E1 and E2 envelope glycoproteins heterodimerize. **Subcellular Location:** Capsid protein: Virion. Host cytoplasm. Host mitochondrion. Note=The capsid protein is concentrated around Golgi region. E1 envelope glycoprotein: Virion membrane; Single-pass type I membrane protein. Host Golgi apparatus membrane; Single-pass type I membrane protein. Note=E1 and E2 form heterodimer in the endoplasmic reticulum before they are transported to and retained in the Golgi complex, where virus assembly occurs. E1 possesses an endoplasmic reticulum retention signal, and unassembled E2 and E1 subunits are retained in the endoplasmic reticulum. Presumably, assembly of E2 and E1 would mask the signal, thereby allowing transport of the heterodimer to the Golgi complex. E2 envelope glycoprotein: Virion membrane; Single-pass type I membrane protein. Host Golgi apparatus membrane; Single-pass type I membrane protein. Note=E1 and E2 form heterodimer in the endoplasmic reticulum before they are transported to and retained in the Golgi complex, where virus assembly occurs. E1 possesses an endoplasmic reticulum retention signal, and unassembled E2 and E1 subunits are retained in the endoplasmic reticulum. Presumably, assembly of E2 and E1 would mask the signal, thereby allowing transport of the heterodimer to the Golgi complex. **Post-translational modifications:** Specific enzymatic cleavages in vivo yield mature proteins. An internal signal peptide at the capsid C-terminus directs E2-E1 sequences of the polyprotein precursor to the endoplasmic reticulum. Signal peptidase cleaves the precursor between Capsid and E2, releasing the capsid in the cytoplasm and the E2 N-terminus in ER. Another signal peptide at E2 C-terminus directs E1 to the ER, with a similar mechanism. Capsid is phosphorylated on Ser-46 by host. This phosphorylation negatively regulates capsid protein RNA-binding activity. Dephosphorylated by human PP1A (By similarity). **Database links:** UniProtKB/Swiss-Prot: P08563.2

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