

Sin Nombre Virus Glycoprotein 2 Antibody

Catalog # ASC11755

Product Information

Application	E
Primary Accession	Q89905
Other Accession	NP_941974 , 38371724
Reactivity	Virus
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	125735
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Sin Nombre virus glycoprotein 2 antibody can detect 10ng Sin Nombre virus glycoprotein 2 peptide in ELISA at 1 µg/ml.

Additional Information

Gene ID	2654026;80557443
Target/Specificity	SNVsMgp1;
Reconstitution & Storage	Sin Nombre Glycoprotein 2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	Sin Nombre Virus Glycoprotein 2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GP
Function	[Glycoprotein N]: Forms homotetramers with glycoprotein C at the surface of the virion (By similarity). Attaches the virion to host cell receptors including integrin ITGAV/ITGB3 (Probable). This attachment induces virion internalization predominantly through clathrin-dependent endocytosis (By similarity). Mediates the assembly and budding of infectious virus particles through its interaction with the nucleocapsid protein and the viral genome (By similarity). May dysregulate normal immune and endothelial cell responses through an ITAM motif (By similarity). Translocates to mitochondria, binds to host TUFM and recruits MAP1LC3B (By similarity). These interactions induce mitochondrial autophagy and therefore destruction of host MAVS leading to inhibition of type I interferon (IFN) responses (By similarity). Concomitant breakdown of glycoprotein N is apparently prevented by the nucleoprotein that may inhibit Gn-stimulated autophagosome-lysosome fusion (By similarity). Interacts with the viral genomic RNA (By similarity).

Cellular Location [Glycoprotein N]: Virion membrane {ECO:0000250|UniProtKB:P08668}; Multi-pass membrane protein. Host cell surface {ECO:0000250|UniProtKB:P08668}. Host Golgi apparatus membrane {ECO:0000250|UniProtKB:P08668}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P08668}. Host endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P08668}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P08668}. Host mitochondrion {ECO:0000250|UniProtKB:P08668}. Note=Interaction between glycoprotein N and glycoprotein C is essential for proper targeting of glycoprotein N to the host plasma membrane complex, where virion budding occurs {ECO:0000250|UniProtKB:P08668}

Background

Sin Nombre virus (SNV) is a rodent-borne hantavirus of the family Bunyaviridae, an enveloped, negative-sense RNA viruses with a tripartite genome that can cause hantavirus pulmonary syndrome (HPS) (1). Hantavirus glycoprotein precursor (GPC) is posttranslationally cleaved into two glycoproteins G1 (Gn) and G2 (Gc). While the G1 glycoprotein is thought to be degraded by the host autophagy machinery, and this autophagic clearance is required for efficient virus replication (2), no such degradation was observed for the G2 glycoprotein.

References

Spiropoulou CF, Morzunov S, Feldmann H, et al. Genome structure and variability of a virus causing hantavirus pulmonary syndrome. *Virology* 1994; 200:715-23.
Hussein ITM, Cheng E, Ganaie SS, et al. Autophagic clearance of Sin Nombre hantavirus glycoprotein Gn promotes virus replication in cells. *J. Virol.* 2012; 86:7520-9.

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