Leinco Technologies, Inc.
excellence in early discovery research™

Anti-Sin Nombre Virus, Glycoprotein (Hantavirus)

Purified No Carrier Protein

Recombinant Monoclonal Antibody

Product Information

Product No.:	H289
Clone:	SNV-39
Isotype:	Human IgG1

Product Description

Specificity:
The SNV-39 monoclonal antibody is specific for the glycoprotein complex (Gn/Gc) of the Sin Nombre virus (SNV). It is also capable of binding and neutralizing many OWH isolates.

Antigen Distribution:
Hantavirus infects and replicates in pulmonary and cardiac endothelium in both humans and deer mice, the natural host.

Background:
Belonging to the Bunyaviridae family, Hantaviruses are single-stranded, negative-sense RNA viruses characterized by an enveloped structure. These pathogens are categorized broadly by geography: "New World" hantaviruses (NWH) circulate in the Americas and are the causative agents of highly lethal Hantavirus Pulmonary Syndrome (HPS). Conversely, "Old World" hantaviruses (OWH) are native to Europe and Asia, primarily causing Hemorrhagic Fever with Renal Syndrome (HFRS). Transmission occurs when humans inhale aerosolized excreta from specific rodent reservoir hosts. Among NWH strains, the Sin Nombre Virus (SNV) stands out as a highly pathogenic variant first identified in the American Southwest.

Specificity & Cross-Reactivity
Monoclonal antibody Clone SNV-39 is an engineered recombinant tool that specifically targets the heterodimeric surface glycoprotein complex (Gn/Gc) of the Sin Nombre virus. By executing high-affinity binding to these structural proteins, SNV-39 serves as an effective neutralizing agent capable of blocking viral cell-entry mechanisms. In addition to targeting NWH, this clone exhibits cross-reactive properties against various OWH strains, including the Seoul (SEOV), Hantaan (HTNV), Dobrava-Belgrade (DOBV), and Puumala (PUUV) viruses.

Commercial Diagnostic & Research Applications
Because it recognizes a broad spectrum of both Old and New World isolates, Clone SNV-39 is a vital component for IVD assay development and multiplex pan-Hantavirus diagnostic systems. It is particularly valuable for manufacturers evaluating multiple antibody clones to establish high-sensitivity sandwich ELISAs, lateral flow immunoassays (LFIs), and western blot protocols.

Supplied in a specialized purified, carrier-free format (without BSA, sodium azide, or stabilizers), SNV-39 allows for seamless, immediate conjugation to enzymes, fluorophores, or magnetic beads. For virologists and pharmaceutical developers, it provides a robust, reproducible research tool for viral entry inhibition studies, vaccine evaluation, and epitope mapping.

Known Reactivity Species:
Sin Nombre

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

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Expression Host:
HEK-293 Cells

Format:
Purified No Carrier Protein

Immunogen:
Sequenced from PBMCs from a donor who had recovered from a naturally-occurring Sin Nombre Virus infection.

Formulation
This recombinant monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity
≥90% monomer by analytical SEC and SDS-Page

Storage and Stability
This antibody may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.
Avoid Repeated Freeze Thaw Cycles.

Product Preparation
This monoclonal antibody is manufactured, purified, and certified at our central facility in St. Louis, Missouri, USA. Leinco Technologies operates under an advanced Quality Management System proudly certified to both ISO 9001:2015 and ISO 13485:2016 standards, fulfilling the exact traceability and compliance requirements of the global in vitro diagnostics (IVD) industry.

- Controlled Cleanroom Processing: All aseptic dispensing and purification steps are performed within specialized Class 10,000 (ISO 7) cleanrooms to eliminate bioburden and contamination.

- Conjugation-Ready Formulation: Prepared as a highly concentrated liquid containing no carrier proteins, preservatives, or chemical stabilizers. This guarantees uncompromised performance in downstream chemical labeling and cross-linking workflows.

- Stringent Lot Analytics: Each production batch is rigorously screened via SDS-PAGE and functional binding assays to secure excellent lot-to-lot consistency, minimizing experimental drift for long-term clinical assay manufacturing.
Other Applications Reported in Literature:

ELISA,
N

Country of Origin
USA

References
1. CDC. About Hantavirus. Hantavirus. Published June 4, 2024. Accessed June 17, 2024. https://www.cdc.gov/hantavirus/about/index.html
2. Engdahl TB, Binshtein E, Brocato RL, et al. Antigenic mapping and functional characterization of human New World hantavirus neutralizing antibodies. Elife. 2023;12:e81743.

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