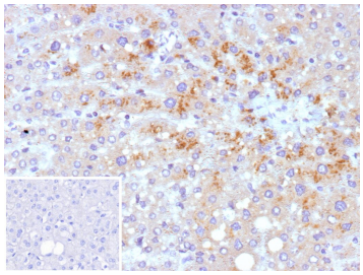
NS3 Antibody / Non-structural protein 3 [clone rMMM33] (V6049)

Catalog No.	Formulation	Size
V6049-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6049-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V6049SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

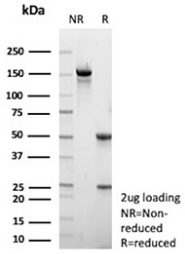
Recombinant MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	rMMM33
UniProt	P27958
Localization	Host cell membrane, Host cytoplasm, Host endoplasmic reticulum membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This NS3/Non-structural protein 3 antibody is available for research use only.



Immunohistochemistry of NS3 antibody in human HCV-infected liver tissue. FFPE human hepatitis C virus-infected liver demonstrates cytoplasmic HRP-DAB brown staining within hepatocytes, consistent with viral Non-structural protein 3 expression in infected cells. Clone rMMM33, a recombinant mouse monoclonal antibody, was used for detection. An inset image shows PBS substituted for the primary antibody as a negative control, confirming absence of specific staining. Heat-induced epitope retrieval was performed by heating sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95oC followed by cooling at room temperature for 20 minutes prior to staining.



SDS-PAGE Analysis of Purified NS3/Non-structural protein 3 antibody (clone rMMM33). Confirmation of Purity and Integrity of Antibody.

Description

NS3 antibody recognizes Non-structural protein 3, a multifunctional viral protein essential for genome replication and polyprotein processing in several positive-sense RNA viruses, most notably hepatitis C virus. Non-structural protein 3, commonly referred to as NS3, contains protease and helicase domains that coordinate viral replication, RNA unwinding, and assembly of replication complexes. NS3 Antibody is designed to detect viral NS3 expression in infected cells and experimental systems studying viral life cycles and antiviral strategies.

NS3 is typically synthesized as part of a larger viral polyprotein that is cleaved to generate functional viral components. The N-terminal serine protease domain requires association with its cofactor NS4A for full enzymatic activity, enabling cleavage of downstream non-structural proteins required for replication. The C-terminal region functions as an RNA helicase and NTPase, driving unwinding of viral RNA intermediates during genome replication. This dual-domain architecture makes NS3 central to viral propagation and a primary target of direct-acting antiviral drugs.

In hepatitis C virus biology, NS3 localizes to cytoplasmic membranous replication complexes derived from endoplasmic reticulum membranes. Through coordinated proteolytic and helicase activity, it regulates replication complex assembly and viral RNA amplification. NS3-mediated cleavage events are also implicated in modulation of host innate immune responses, as viral protease activity can interfere with host antiviral signaling pathways.

Because of its enzymatic roles and conserved sequence motifs, NS3 is widely used as a biomarker of active viral replication in research models. Detection of NS3 expression assists in evaluating viral infection dynamics, screening antiviral compounds, and characterizing replication-defective mutants. Clone rMMM33 is a recombinant mouse monoclonal antibody that recognizes Non-structural protein 3 and supports studies of viral replication, protein processing, and host-virus interaction mechanisms in controlled research applications.

Application Notes

1. Optimal dilution of the NS3/Non-structural protein 3 antibody should be determined by the researcher.

2. This NS3/Non-structural protein 3 antibody is recombinantly produced by expression in CHO cells.

Immunogen

Prokaryotic recombinant protein corresponding to non-structural protein 3 of hepatitis C virus, strain 1b was used as the immunogen for the NS3/Non-structural protein 3 antibody.

Storage

NS3/Non-structural protein 3 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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