

Certificate of Analysis**Product:** Anti-SARS-CoV Nonstructural Protein 13 (nsp13) (Rabbit)**Code:** 100-401-A54**Lot #:** 17041**Size:** 100 µl**Physical State:** Liquid (sterile filtered))**Protein Concentration:** 85 mg/ml (by Refractometry)**Buffer:** None**Stabilizer:** None**Preservative:** 0.01% (w/v) Sodium Azide

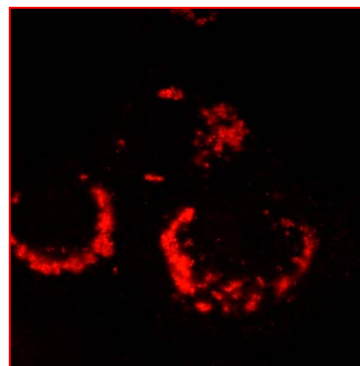
Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

Background Information: The coronavirus nonstructural protein 13 (nsp13) is one of the SARS-Coronavirus replicase cleaving products encoded by ORF1b. Nsp13 is thought to be part of the viral replication complex, which is associated with intracellular membranes. Nsp13 contains a C-terminal NTPase/Helicase domain and an N-terminal putative zinc-binding motif.

Recommended Dilutions:

IMMUNO PRECIPITATION	User Optimized
WESTERN BLOT	User Optimized
IMMUNO ELECTRON MICROSCOPY	1:300
IF MICROSCOPY	1:800
OTHER APPLICATIONS	User Optimized

Figure. Immunofluorescence Microscopy using Rockland Immunochemicals anti-SARS-CoV nsp13 antibody, 6-h post infection Vero-E6 cells. For detection Cy3 conjugated Goat-anti-Rabbit IgG MX (611-104-122) was used. *Personal Communication, Eric Snijder, Leiden University Medical Center, Leiden, Netherlands.*



Application Note(s): This antibody has been tested for use in western blotting, immunofluorescence microscopy and immunoelectron microscopy. Specific conditions for reactivity should be optimized by the end user. Expect a band of approximately 67 kDa in size corresponding to SARS-CoV nsp13 by western blotting in the appropriate cell lysate or extract. For immunofluorescence microscopy, Vero-E6 cells, grown on glass slides, were infected with SARS-CoV-Fr1 strain for 1 h at 37°C. Infection occurred in PBS/DEAE/2%FCS followed by exchange to EMEM/25mMHEPES/2%FCS. Cells were fixed with PBS/3%PFA. After washing fixed cells, antibody incubation was performed in PBS/5%FCS for 30 min.

Purity and Specificity: This antibody is directed against SARS-Coronavirus nsp13 protein. The product is neat antiserum. Cross reactivity with homologues from other sources has not been determined.

Relevant Link(s): NCBI Link (polyprotein) [NP_828849](https://pubmed.ncbi.nlm.nih.gov/161828849/) NCBI Link (nsp13) [NP_828870](https://pubmed.ncbi.nlm.nih.gov/161828870/)

Immunogen: This antibody was prepared from whole rabbit serum produced by repeated immunizations with a BSA-coupled synthetic peptide corresponding to the C-terminus (amino acid residues 584-601) of the SARS Coronavirus nonstructural protein 13.

Protein Sequence: SARS Coronavirus Non Structural Protein 13, 601 aa, predicted MW 66.9 kDa

1	avgacvlcns	qtslrcgaci	rrpfckccc	ydhvistshk	lvslnpyvc	napgcdvtdv
61	tqlylggmsy	yckshkppis	fplcangqvf	glykntcvgs	dnvtdfnaia	tcdwtnagdy
121	ilantcterl	klfaaetlka	teetfklsyg	iatvrevlsd	relhlswevg	kprpplnrny
181	vftgyrvtkn	skvqigeytf	ekgdygdavv	yrgrtttykln	vgdyfvltsh	tvmpslsaptl
241	vpqehyvrit	glypltnisd	efssnvanyq	kvgmqkystl	qgppgtgksh	faiglalyyp
301	sarivytacs	haavdalcek	alkyldpkc	sriipararv	ecfdkfvns	tleqyvfctv
361	nalpettadi	vvfdeismat	nydlsvvnar	lrakhyvyig	dpaqlpaprt	lltkgtlepe
421	yfnsvcrlnk	tigpdmflgt	crrcpaeivd	tvshalvydnk	lkahkdksaq	cfkmfykgvi
481	thdvssainr	pqigvvreft	trnpawrkav	fispynsqna	vaskilglpt	qtdvssqgse
541	ydyviftqtt	etahscnvnr	fnvairaki	gilcimsdrd	lydklqftsl	eiprrnvatl
601	q					

General References:

Snijder, E. J., P. J. Bredenbeek, J. C. Dobbe, V. Thiel, J. Ziebuhr, L. L. M. Poon, Y. Guan, M. Rozanov, W. J. M. Spaan, and A. E. Gorbalenya. 2003. Unique and conserved features of genome and proteome of SARS-coronavirus, an early split-off from the coronavirus group 2 lineage. *J. Mol. Bio.* **331**:991-1004.

Prentice, E., J. McAuliffe, X. T. Lu, K. Subbarao, and M. R. Denison. 2004. Identification and characterization of severe acute respiratory syndrome coronavirus replicase proteins. *J. Virol.* **78**:9977-9986.

Ivanov, K. A., V. Thiel, J. C. Dobbe, Y. van der Meer, E. J. Snijder, and J. Ziebuhr. 2004. Multiple enzymatic activities associated with Severe acute respiratory syndrome coronavirus helicase. *J. Virol.* **78**:5619-5632.

Seybert, A., A. Hegyi, S. G. Siddell, and J. Ziebuhr. 2000. The human coronavirus 229E superfamily 1 helicase has RNA and DNA duplex-unwinding activities with 5'-to-3' polarity. *RNA.* **6**:1056-1068.

Snijder, E.J., van der Meer, Y., Zevenhoven-Dobbe, J.C., Onderwater, J.J.M., van der Meulen, J., Koerten, H.K., and Mommaas, A.M. 2006. Ultrastructure and origin of membrane vesicles associated with the SARS-coronavirus replication complex. Manuscript in preparation.

Related Products:

#200-401-A50	Protein A Purified Anti-SARS-CoV (N) Protein (Rabbit)	#200-401-A54	Protein A Purified Anti-SARS-CoV nsp13 (Rabbit)
#200-401-A51	Protein A Purified Anti-SARS-CoV 3CL Protease (Rabbit)	#200-401-A55	Protein A Purified Anti-SARS-CoV (M) Protein (Rabbit)
#200-401-A52	Protein A Purified Anti-SARS-CoV nsp3 (Rabbit)	#611-103-122	HRP Anti-RABBIT IgG (H&L) (GOAT) MX10
#200-401-A53	Protein A Purified Anti-SARS-CoV nsp8 (Rabbit)	#611-132-122	IRDye800 Anti-RABBIT IgG (H&L) (GOAT) MX10
#MB-070	Blocking Buffer for Fluorescent Western Blotting	#KIA-003	MaxTag™ Anti-RABBIT IgG Kit for Immunoblotting

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.