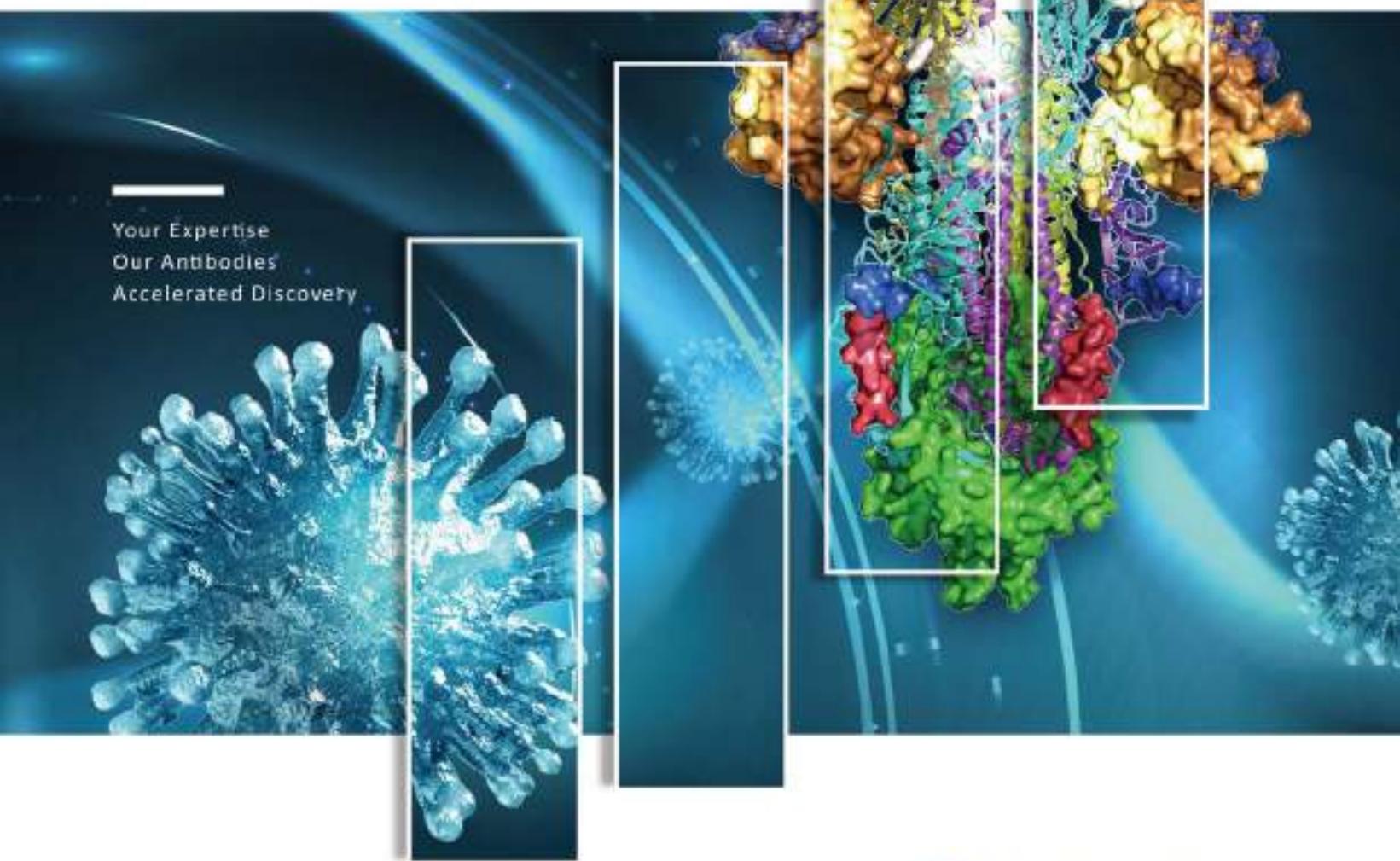


SARS-CoV-2 (COVID-19) Research

—
Your Expertise
Our Antibodies
Accelerated Discovery



Quality Antibodies · Quality Results

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Full Listing of Products for SARS-CoV-2 (COVID-19) Research

Antibodies

Cat. No.	Product Name	Clonality	Applications
GTX635656	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL1]	Rb mAb	WB, ICC/IF, ELISA, sELISA
GTX635654	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL6]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA, FACS
GTX635671	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL134]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA
GTX635672	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL263]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX635713	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL13402]	Rb mAb	WB, ICC/IF, ELISA, sELISA
GTX635708	SARS-CoV-2 (COVID-19) Spike S1 antibody [GT263]	Ms mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX135384	SARS-CoV-2 (COVID-19) Spike S1 antibody	Rb pAb	WB, ICC/IF, ELISA
GTX635692	SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA
GTX135709	SARS-CoV-2 (COVID-19) Spike RBD antibody	Rb pAb	WB, FACS, Neutralizing/Inhibition
GTX135385	SARS-CoV-2 (COVID-19) Spike RBD antibody	Rb pAb	WB, ICC/IF
GTX635693	SARS-CoV-2 (COVID-19) Spike S2 antibody [HL237]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX135386	SARS-CoV-2 (COVID-19) Spike S2 / S2' antibody	Rb pAb	WB, ICC/IF, ELISA, sELISA
GTX632604	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [LA9]	Ms mAb	WB, ICC/IF, IHC-P (cell pellet), FACS, IP, ELISA, sELISA
GTX135356	SARS-CoV-2 (COVID-19) Spike antibody	Rb pAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX135360	SARS-CoV-2 (COVID-19) Spike antibody	Rb pAb	WB, ICC/IF, ELISA, sELISA
GTX01555	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [CR3022]	Hu mAb	ELISA, Neutralizing/Inhibition
GTX01556	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [CR3022-RB]	Rb mAb	ELISA, Neutralizing/Inhibition
GTX635712	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL455-MS]	Ms mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX635685	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5410]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX635685-17	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5410] (Gold)	Rb mAb	Immunoassay
GTX635689	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5511]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX635680	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL146]	Rb mAb	WB, ICC/IF, ELISA, sELISA
GTX635678	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL149]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX635679	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL344]	Rb mAb	WB, ICC/IF, IHC-P, IHC-P (cell pellet), IHC-Fr, ELISA, sELISA
GTX635686	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL448]	Rb mAb	WB, ICC/IF, IHC-P, IHC-P (cell pellet), ELISA, sELISA
GTX635686-01	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL448] (HRP)	Rb mAb	ELISA
GTX635687	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL453]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA
GTX635688	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL455]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX632269	SARS-CoV / SARS-CoV-2 (COVID-19) nucleocapsid antibody [6H3]	Ms mAb	WB, ICC/IF, IHC-P (cell pellet), IP, ELISA, sELISA
GTX135357	SARS-CoV-2 (COVID-19) nucleocapsid antibody	Rb pAb	WB, ICC/IF, IHC-P (cell pellet), IHC-Fr, FACS, IP, ELISA, sELISA
GTX135361	SARS-CoV-2 (COVID-19) nucleocapsid antibody	Rb pAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTX135467	SARS-CoV-2 (COVID-19) RdRp (nsp12) antibody	Rb pAb	WB, ICC/IF
GTX135469	SARS-CoV-2 (COVID-19) RdRp (nsp12) antibody	Rb pAb	WB
GTX135591	SARS-CoV-2 (COVID-19) ORF8 antibody	Rb pAb	WB, ICC/IF
GTX135612	SARS-CoV-2 (COVID-19) nsp1 antibody	Rb pAb	WB, ICC/IF
GTX135589	SARS-CoV-2 (COVID-19) PLpro (nsp3) antibody	Rb pAb	WB
GTX135614	SARS-CoV-2 (COVID-19) PLpro (nsp3) antibody	Rb pAb	WB, ICC/IF
GTX632602	SARS-CoV / SARS-CoV-2 (COVID-19) ORF7a antibody [3C9]	Ms mAb	WB, ICC/IF
GTX632696	SARS-CoV / SARS-CoV-2 (COVID-19) NSP8 antibody [SA10]	Ms mAb	WB, ICC/IF, FACS



ELISA Pairs

Cat. No.	Product Name
GTx500041	SARS-CoV-2 (COVID-19) Spike ELISA Pair - [1A9 / HL263]
GTx500040	SARS-CoV-2 (COVID-19) Spike ELISA Pair - [1A9 / HL6]
GTx500043	SARS-CoV-2 (COVID-19) Spike ELISA Pair [1A9 / HL13402]
GTx500045	SARS-CoV-2 (COVID-19) Nucleocapsid EUSA Pair [HL5511 / HL448]
GTx500042	SARS-CoV-2 (COVID-19) Nucleocapsid EUSA Pair [HL5410 / HL455-MS]

Recombinant Proteins

Cat. No.	Product Name	Expression System
GTxD1554-pro	SARS-CoV-2 (COVID-19) Spike S1 protein, His tag (active)	HEK293
GTxD1548-pro	SARS-CoV-2 (COVID-19) Spike S1 protein, His and Avi tag (active)	HEK293
GTx135684-pro	SARS-CoV-2 (COVID-19) Spike S2 (ECD) protein, mouse IgG Fc tag	HEK293
GTxD1559-pro	SARS-CoV-2 (COVID-19) Spike S2 (ECD) protein, human IgG Fc tag	HEK293
GTxD1546-pro	SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active)	HEK293
GTx135357-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag	E. coli
GTx135592-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag	HEK293
GTx135746-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag (Gold)	HEK293
GTxD1547-pro	SARS-CoV-2 (COVID-19) Envelope protein, His and Avi tag	E. coli
GTxD1565-pro	SARS-CoV-2 (COVID-19) Envelope Protein, GST and His Tag	HEK293
GTx135648-pro	SARS-CoV-2 (COVID-19) 3CLpro (nsp5) protein, His tag	E. coli
GTxD1557-pro	SARS-CoV-2 (COVID-19) 3CLpro (nsp5) protein, His and Avi tag	E. coli

Cell Pellet Blocks

Cat. No.	Product Name	Applications
GTx435640	SARS-CoV-2 (COVID-19) Spike FFPE 293T cell pellet block	IHC-P (cell pellet)
GTx435543	SARS-CoV-2 (COVID-19) Spike S1 FFPE 293T cell pellet block	IHC-P (cell pellet)
GTx435644	SARS-CoV-2 (COVID-19) Spike S2 FFPE 293T cell pellet block	IHC-P (cell pellet)
GTx435641	SARS-CoV-2 (COVID-19) Nucleocapsid FFPE 293T cell pellet block	IHC-P (cell pellet)
GTx435642	SARS-CoV-2 (COVID-19) Envelope FFPE 293T cell pellet block	IHC-P (cell pellet)
GTx435645	SARS-CoV-2 (COVID-19) Membrane FFPE 293T cell pellet block	IHC-P (cell pellet)

Full Listing of Products for SARS-CoV-2 (COVID-19) Research

Overexpression Lysates

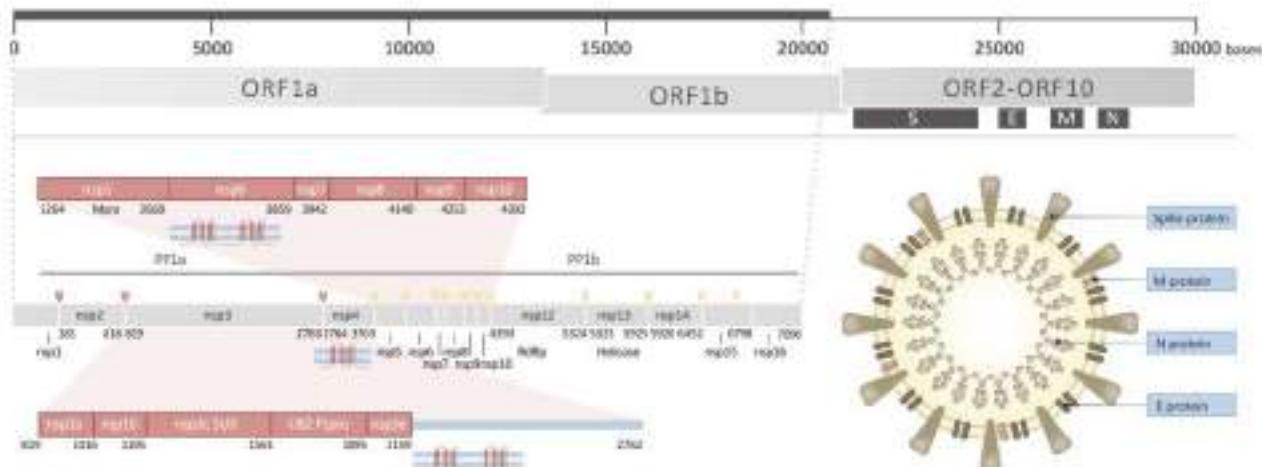
Cat. No.	Product Name	Applications
GTX535664	SARS-CoV-2 (COVID-19) Spike overexpression 293T whole cell lysate	WB, ELISA
GTX535663	SARS-CoV-2 (COVID-19) Spike S1 overexpression 293T whole cell lysate	WB
GTX535665	SARS-CoV-2 (COVID-19) Nucleocapsid overexpression 293T whole cell lysate	WB, ELISA
GTX535668	SARS-CoV Spike overexpression 293T whole cell lysate	WB

Products for SARS-CoV-2 (COVID-19) Host Cell Entry Research

Cat. No.	Product Name	Applications
GTX101395	ACE2 antibody [N1N2], N-term	WB, ICC/IF, IHC-P, FACS, ELISA
GTXD1160	ACE2 antibody [SN0754]	WB, ICC/IF, IHC-P
GTX15349	ACE2 antibody	WB, ICC/IF, IHC-P, ELISA
GTX135683-pro	Human ACE2(ECD) protein, mouse IgG Fc tag	WB, ELISA
GTXD1550-pro	Human ACE2 protein, His and Avi tag	ELISA
GTX100743	TMPRSS2 antibody [N2C3]	WB, IHC-P
GTXD1523	Carnostat mesylate	TMPRSS2 inhibitor

A Review of the SARS-CoV-2 (COVID-19) Genome and Proteome

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), previously known as 2019 Novel Coronavirus (2019-nCoV), is a positive-sense, single-stranded RNA virus that causes the potentially lethal COVID-19 respiratory tract infection. This new virus belongs to the genus Betacoronavirus, which also includes SARS-CoV and MERS-CoV.



The SARS-CoV-2 has a ~29.9 kilobase positive-sense RNA genome that contains as many as 29 open reading frames. Though the exact number of functional proteins remains to be established, there are at least 16 nonstructural proteins (nsp), four structural proteins, and likely nine accessory proteins. Based on previous work with SARS-CoV and other coronaviruses, scientists have identified functions for the majority of these factors, though work is ongoing. A schematic of the SARS-CoV-2 genome is shown in the figure above, while the known or hypothesized functions of the viral proteins, based on studies of SARS-CoV-2, SARS-CoV, and other coronaviruses, are summarized below in Table 1. Of note, nonstructural proteins (nsps) 1-16 are encoded in the ORF1a and ORF1b regions, which give rise to polyproteins 1a and 1ab.

A Review of the SARS-CoV-2 (COVID-19) Genome and Proteome

Table 1. Putative Functions of SARS-CoV-2 Proteins

Protein	Functions	References
Spike (S) (ORF2)	Spike: full-length (~1273 a.a. in SARS-CoV-2) protein precursor is cleaved into glycosylated subunits, S1 and S2 (S2'). S1 binds to the host's receptor, ACE2, while S2 mediates viral and host membrane fusion.	1
Nucleocapsid (N) (ORF9a)	Nucleocapsid (~419 a.a. in SARS-CoV-2) binds viral genomic RNA and forms a helical ribonucleocapsid. Involved in genome protection, viral RNA replication, virion assembly, and immune evasion (including IFN-I suppression). Interacts with M and nsp3 proteins.	2
Membrane (M) (ORF5)	Membrane/matrix protein (~222 a.a. in SARS-CoV-2) is the most abundant structural component of the virion, and very conserved. Mediates assembly and budding of viral particles through recruitment of other structural proteins to "ER-Golgi-intermediate compartment (ERGIC)". Interaction with N for RNA packaging into virion. Interacts with accessory proteins 3a and 7a. Mitigation of immune response?	3
Envelope (E) (ORF4)	Envelope small membrane protein (~75 a.a. in SARS-CoV-2) is a single-pass type III membrane protein involved in viral assembly, budding, and pathogenesis. Localizes to ERGIC. Forms a homopentameric ion channel and is a viroporin. Interacts with M, N, 3a, and 7a.	4
nsp1	Nonstructural protein 1 (nsp1; ~180 a.a. in SARS-CoV-2) likely inhibits host translation by interacting with 40S ribosomal subunit, leading to host mRNA degradation through cleavage near their 5'UTRs. Promotes viral gene expression and immune evasion in part by interfering with interferon-mediated signaling.	5
nsp2	nsp2 (~638 a.a. in SARS-CoV-2) interacts with host factors prohibitin 1 and prohibitin 2, which are involved in many cellular processes including mitochondrial biogenesis. It appears that nsp2 may change the intracellular milieu and perturb host intracellular signaling.	6
nsp3	nsp3 (~1945 a.a. in SARS-CoV-2) is a papain-like protease (PLpro) and multi-pass membrane protein that processes the viral polyprotein to release nsp1, nsp2, and nsp3. It also exhibits deubiquitinating and deSGylating activities. Interacts with nsp4 and nsp6.	7
nsp4	nsp4 (~500 a.a. in SARS-CoV-2) is required for viral replication by inducing (with nsp3) assembly of, and localizing to, double-membrane cytoplasmic vesicles. Multi-pass membrane protein.	8
nsp5	nsp5 (3Cpro; ~306 a.a. in SARS-CoV-2) cleaves at 11 sites in the polyprotein to release nsp4-nsp16. It is also responsible for nsp maturation.	9
nsp6	nsp6 (~290 a.a. in SARS-CoV-2) is a multi-pass membrane protein that induces double-membrane vesicles in infected cells with nsp 3 and nsp4. It also limits autophagosome expansion and interferes with autophagosome delivery of viral factors to lysosomes for destruction.	10, 11
nsp7	nsp7 (~83 a.a. in SARS-CoV-2) forms a hexadecamer with nsp8 as a cofactor for the RNA-dependent RNA polymerase nsp12. May have processivity or RNA primase function.	12
nsp8	nsp8 (~198 a.a. in SARS-CoV-2) forms a hexadecamer with nsp7 as a cofactor for the RNA-dependent RNA polymerase nsp12. May have processivity or RNA primase function. Mutation of certain residues in nsp8 is lethal to SARS-CoV by impacting RNA synthesis.	13
nsp9	nsp9 (~113 a.a. in SARS-CoV-2) functions in viral replication as a dimeric ssRNA-binding protein.	13
nsp10	nsp10 (~139 a.a. in SARS-CoV-2) forms a dodecamer and interacts with both nsp14 and nsp16 to stimulate their respective 3'-5' exoribonuclease and 2'-O-methyltransferase activities in the formation of the viral mRNA capping machinery.	13

Protein	Functions	References
nsp11	nsp11 (~13-23 a.a., depending on the CoV species) is a pp1a cleavage product at the nsp10/11 boundary. For pp1ab, it is a frameshift product that becomes the N-terminal of nsp12. Its function, if any, is unknown.	13
nsp12	nsp12 (~932 a.a. in SARS-CoV-2) is the RNA-dependent RNA polymerase (RdRp) performing both replication and transcription of the viral genome. It has >95% identity to the SARS-CoV polymerase and is inhibited by the nucleoside analogue Remdesivir.	13
nsp13	nsp13 (~601 a.a. in SARS-CoV-2) is a multifunctional superfamily 1 helicase capable of using both dsDNA and dsRNA as substrates with 5'-3' polarity. In addition to working with nsp12 in viral genome replication, it is also involved in viral mRNA capping. It associates with nucleoprotein in membranous complexes.	14
nsp14	nsp14 (~527 a.a. in SARS-CoV-2) has both 3'-5' exonuclease (proofreading during RNA replication) and N7-guanine methyltransferase (viral mRNA capping) activities. Interacts with nsp10.	13
nsp15	nsp15 (~346 a.a. in SARS-CoV-2) is an endoribonuclease that favors cleavage of RNA at the 3'-ends of uridylates. Loss of nsp15 affects both viral replication and pathogenesis. It is also required for evasion of host cell dsRNA sensors.	15
nsp16	nsp16 (~298 a.a. in SARS-CoV-2) interacts with and is activated by nsp10. Its 2'-O-methyltransferase activity is essential for viral mRNA capping. It may also work against host cell antiviral sensors.	13
ORF3a	ORF3a (~275 a.a. in SARS-CoV-2) is a multi-pass membrane protein that forms a homotetrameric viroporin in SARS-CoV. It interacts with accessory protein 7a, M, S and E. May be involved in viral release. Importantly, it also activates both NF-κB and NLRP3 inflammasome and contributes to the generation of cytokine storm.	16
ORF3b	ORF3b (~22 a.a. in SARS-CoV-2) differs from its 154 a.a. SARS-CoV ortholog due to the presence of four premature stop codons. Along with N and ORF6, ORF3b appears to block induction of IFN- β . This 22-residue variant is also present in SARS-CoV-2-related viral genomes in bats and pangolins.	17
ORF6	ORF6 (~61 a.a. in SARS-CoV-2) appears to be a virulence factor in SARS-CoV. It was shown to be an antagonist of type I Interferons (IFNs) and is involved in viral escape from the host innate immune system.	18
ORF7a	ORF7a (~121 a.a. in SARS-CoV-2) is a type I membrane protein that interacts with bone marrow stromal antigen 2 (BST-2) in SARS-CoV. BST-2 tethers virions to the host's plasma membrane. ORF7a binding inhibits BST-2 glycosylation and interferes with this restriction activity. ORF7a also interacts with S, M, E, and ORF3a in SARS-CoV.	19
ORF7b	ORF7b (~43 a.a. in SARS-CoV-2) is a type III integral transmembrane protein in the Golgi apparatus. In SARS-CoV, it appears to be a viral attenuation factor. It may be involved in human infectivity of SARS-CoV-2.	20
ORF8	ORF8 (~121 a.a. in SARS-CoV-2) has only 30% identity to the intact ORF8 of SARS-CoV and might be a luminal ER membrane-associated protein. It may trigger ATF6 activation and affect the unfolded protein response (UPR). Like ORF7b, it may be involved in human infectivity of SARS-CoV-2.	21, 22, 23
ORF9b	ORF9b (~57 a.a. in SARS-CoV-2) is coded for in an alternative ORF within the N gene. In SARS-CoV, it localizes to mitochondria and affects mitochondrial morphology and function, ultimately undermining host cell interferon responses.	24
ORF9c	ORF9c (~70 a.a. in SARS-CoV), also located in the N coding region, interacts with various host proteins including Sigma receptors, implying involvement in lipid remodeling and the ER stress response. It also might target NF-κB signaling.	25
ORF10	ORF10 (~38 a.a. in SARS-CoV-2) interacts with factors in the CUL2 RING E3 ligase complex and thus may modulate ubiquitination.	25

Reagents for SARS-CoV-2 (COVID-19) Research

1.1 Anti-spike antibodies

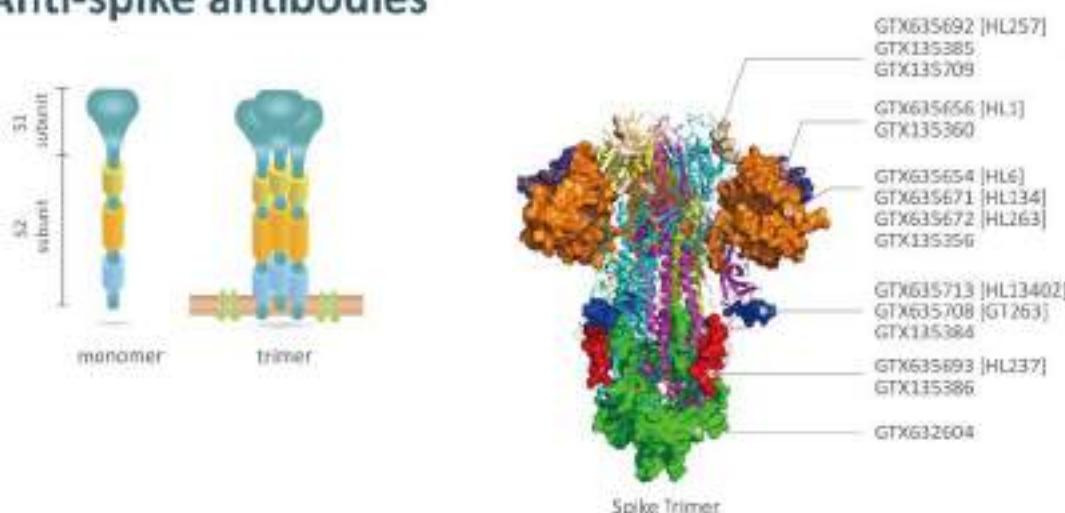


Fig. Structure and antibodies of SARS-CoV-2 spike protein

SARS-CoV-2 spike protein

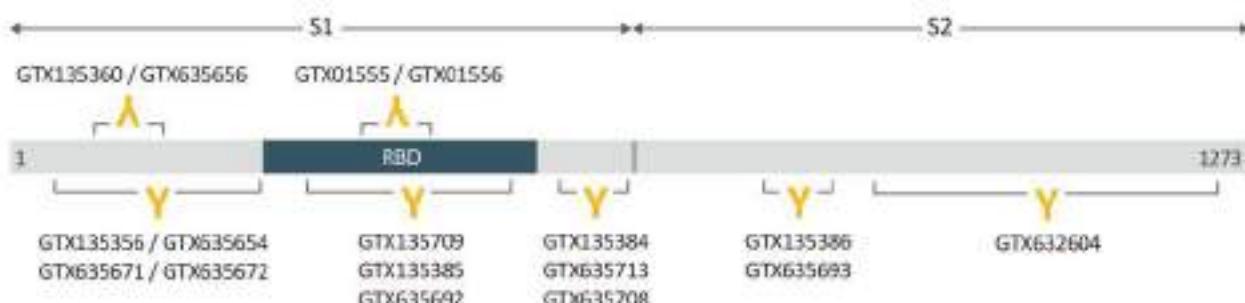


Fig. Antibodies against S protein

Anti-spike antibodies

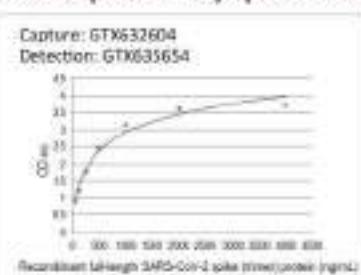
Cat. No.	Product Name	Clonality	Applications
GTxG35656	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL1]	Rb mAb	WB, ICC/IF, ELISA, sELISA
GTxG35654	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL6]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA, FACS
GTxG35671	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL134]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA
GTxG35672	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL263]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTxG35713	SARS-CoV-2 (COVID-19) Spike S1 antibody [HL13402]	Rb mAb	WB, ICC/IF, ELISA, sELISA
GTxG35708	SARS-CoV-2 (COVID-19) Spike S1 antibody [GT263]	Ms mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTxI35384	SARS-CoV-2 (COVID-19) Spike S1 antibody	Rb pAb	WB, ICC/IF, ELISA
GTxG35692	SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA
GTxI35709	SARS-CoV-2 (COVID-19) Spike RBD antibody	Rb pAb	WB, FACS, Neutralizing/Inhibition
GTxI35385	SARS-CoV-2 (COVID-19) Spike RBD antibody	Rb pAb	WB, ICC/IF
GTxG35693	SARS-CoV-2 (COVID-19) Spike S2 antibody [HL237]	Rb mAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTxI35386	SARS-CoV-2 (COVID-19) Spike S2 / S2' antibody	Rb pAb	WB, ICC/IF, ELISA, sELISA
GTxG32604	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [1A9]	Ms mAb	WB, ICC/IF, IHC-P, IHC-P (cell pellet), FACS, IP, ELISA, sELISA
GTxI35356	SARS-CoV-2 (COVID-19) Spike antibody	Rb pAb	WB, ICC/IF, IHC-P (cell pellet), ELISA, sELISA
GTxI35360	SARS-CoV-2 (COVID-19) Spike antibody	Rb pAb	WB, ICC/IF, ELISA, sELISA
GTxO1555	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [CR3022]	Hu mAb	ELISA, Neutralizing/Inhibition
GTxO1556	SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [CR3022-R8]	Rb mAb	ELISA, Neutralizing/Inhibition

Reagents for SARS-CoV-2 (COVID-19) Research

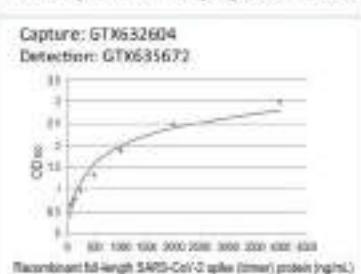
1.1.1 Anti-spike antibody pairs for ELISA

- Monoclonal antibody pairs
- Spike trimer sandwich ELISA validation
- SARS-CoV-2 specific

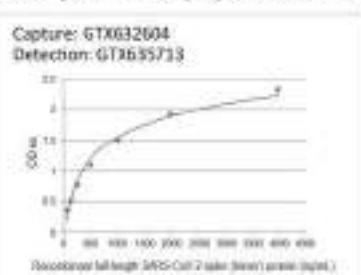
GTx500040 SARS-CoV-2 (COVID-19) Spike ELISA Pair [1A9 / HL6]



GTx500041 SARS-CoV-2 (COVID-19) Spike ELISA Pair [1A9 / HL263]



GTx500043 SARS-CoV-2 (COVID-19) Spike ELISA Pair [1A9 / HL13402]



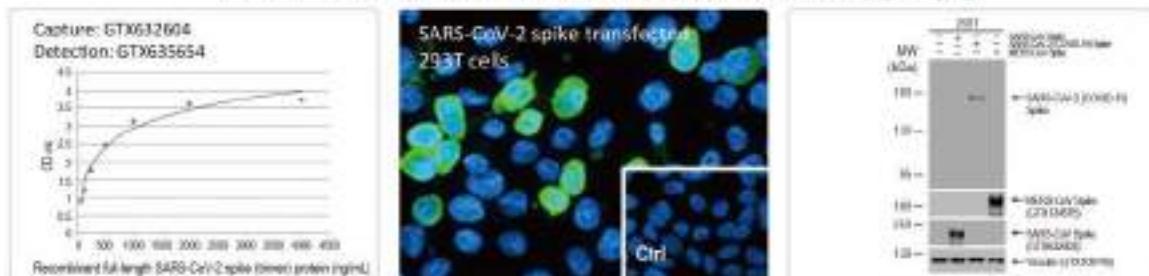
1.1.2 Recombinant rabbit monoclonal antibodies

Spike trimer or Spike S2 (ECD) sandwich ELISA validation

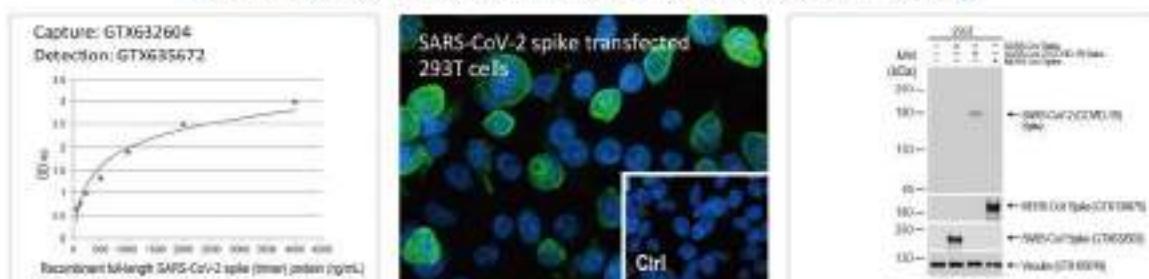
Multiple applications

Cross-reactivity validation

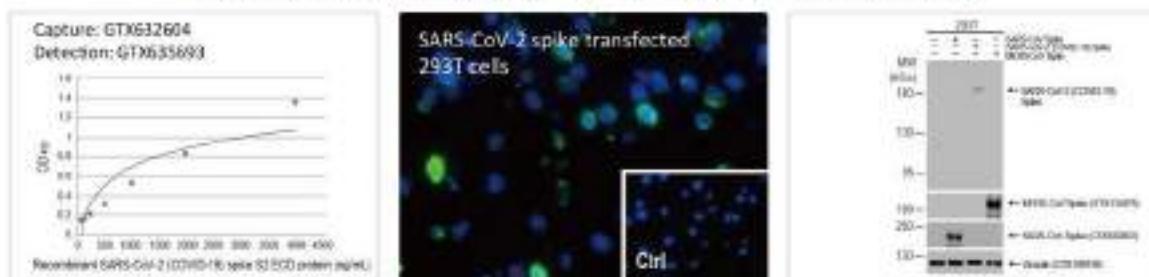
GTX635654 SARS-CoV-2 (COVID-19) Spike S1 antibody [HL6] ⓘ



GTX635672 SARS-CoV-2 (COVID-19) Spike S1 antibody [HL263] ⓘ



GTX635693 SARS-CoV-2 (COVID-19) Spike S2 antibody [HL237] ⓘ



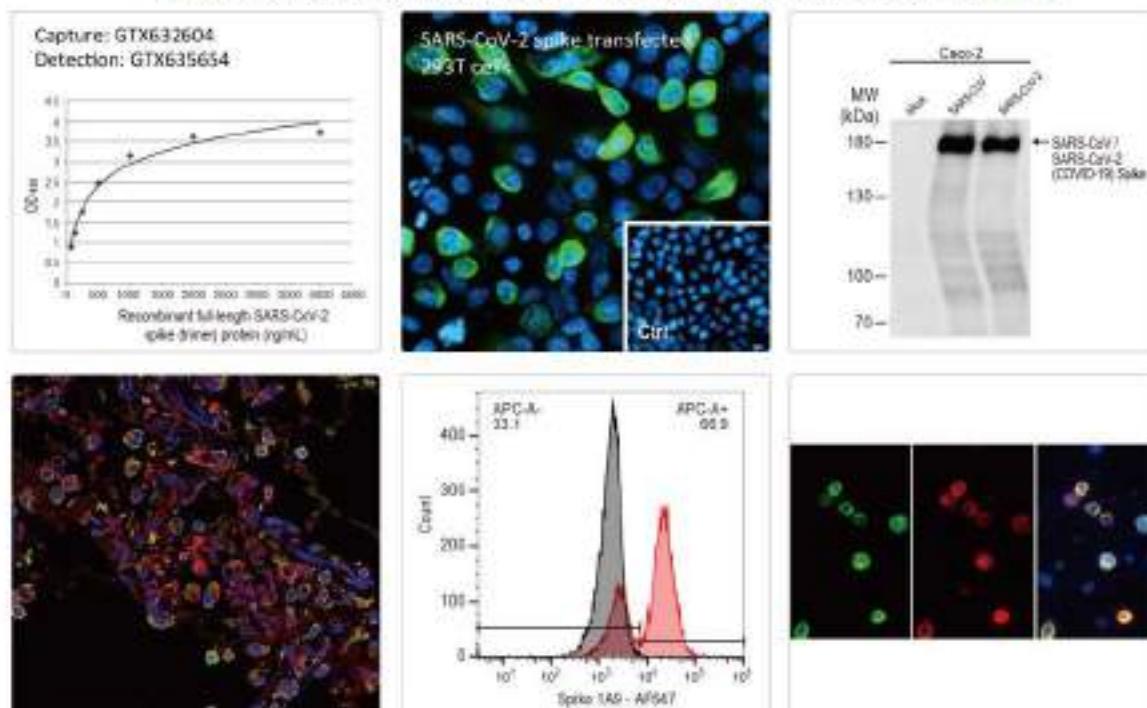
Recombinant

Reagents for SARS-CoV-2 (COVID-19) Research

1.1.3 Mouse monoclonal antibody

- Tested on virus-infected cell lysates
- Spike trimer sandwich ELISA validation
- Multiple applications
- Domain specificity validation
- Citation support
- Customer feedback

GTX632604 SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [1A9] ⓘ ⓘ



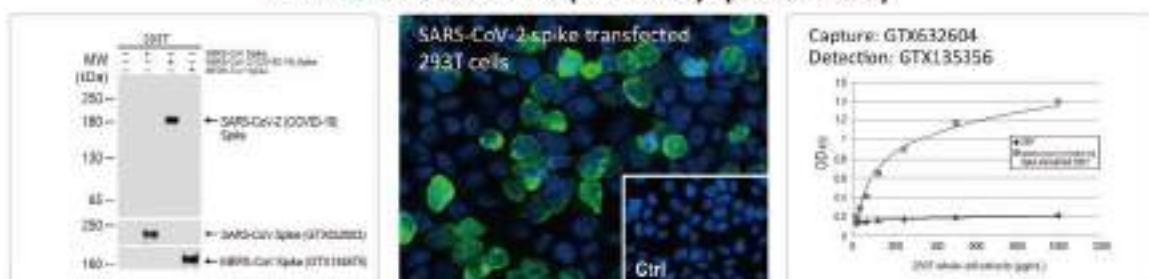
1.1.4 Rabbit polyclonal antibodies

Rabbit polyclonal antibodies

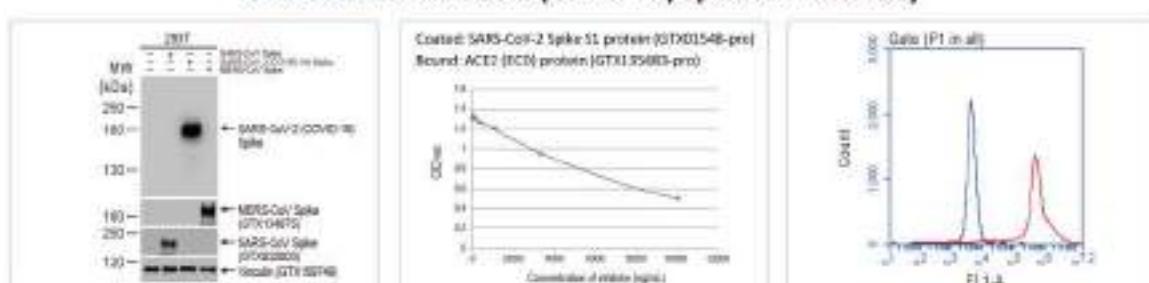
Multiple applications

Cross-reactivity validation

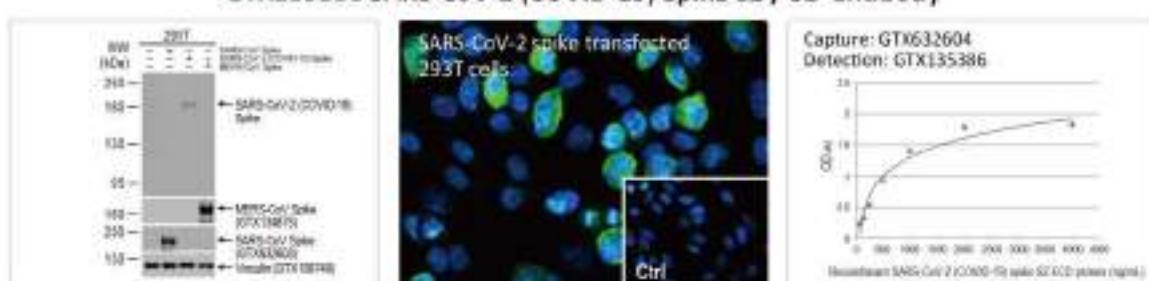
GTX135356 SARS-CoV-2 (COVID-19) Spike antibody



GTX135709 SARS-CoV-2 (COVID-19) Spike RBD antibody



GTX135386 SARS-CoV-2 (COVID-19) Spike S2 / S2' antibody



Reagents for SARS-CoV-2 (COVID-19) Research

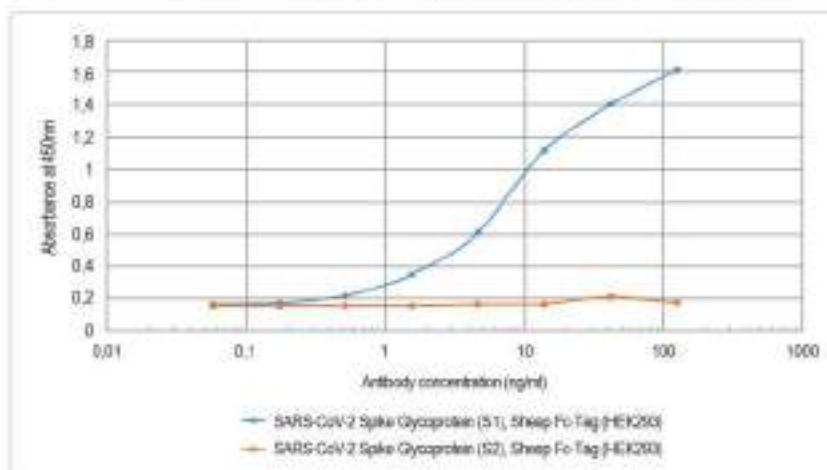
1.1.5 Neutralization antibody

Recombinant monoclonal antibody

SARS-CoV-2 spike glycoprotein binding affinity

Citation support

GTX01555 SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [CR3022] ⓘ ⓘ



Citation Support | Recombinant

1.2 Anti-nucleocapsid antibodies

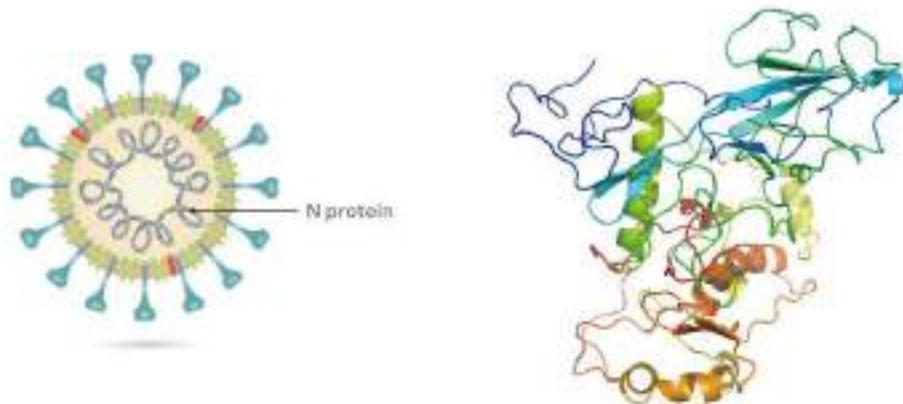


Fig. A putative structure of SARS-CoV-2 Nucleocapsid protein

SARS-CoV-2 Nucleocapsid protein

GTx135357 / GTx635678 / GTx635679 / GTx635680 / GTx635685
GTx635686 / GTx635687 / GTx635688 / GTx635689 / GTx635712



Fig. Antibodies against N protein

Reagents for SARS-CoV-2 (COVID-19) Research

Anti-nucleocapsid antibodies

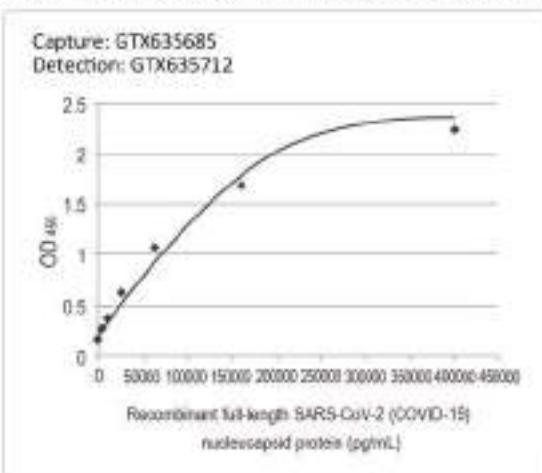
Cat. No.	Product Name	Clonality	Applications
GTX635712	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL455-MS]	Ms mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX635685	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5410]	Rb mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX635685-17	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5410] (Gold)	Rb mAb	Immunoassay
GTX635689	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5511]	Rb mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX635680	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL146]	Rb mAb	WB, ICC/F, ELISA, sELISA
GTX635678	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL249]	Rb mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX635679	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL344]	Rb mAb	WB, ICC/F, IHC-P, IHC-P (cell pellet), IHC-Fr, ELISA, sELISA
GTX635686	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL448]	Rb mAb	WB, ICC/F, IHC-P, IHC-P (cell pellet), ELISA, sELISA
GTX635686-01	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL448] (HRP)	Rb mAb	ELISA
GTX635687	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL453]	Rb mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX635688	SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL455]	Rb mAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA
GTX632269	SARS-CoV / SARS-CoV-2 (COVID-19) nucleocapsid antibody [6H3]	Ms mAb	WB, ICC/F, IHC-P (cell pellet), IP, ELISA, sELISA
GTX135357	SARS-CoV-2 (COVID-19) nucleocapsid antibody	Rb pAb	WB, ICC/F, IHC-P, IHC-P (cell pellet), IHC-Fr, FACS, IP, ELISA, sELISA
GTX135361	SARS-CoV-2 (COVID-19) nucleocapsid antibody	Rb pAb	WB, ICC/F, IHC-P (cell pellet), ELISA, sELISA

1.2.1 Anti-nucleocapsid antibody pairs for ELISA

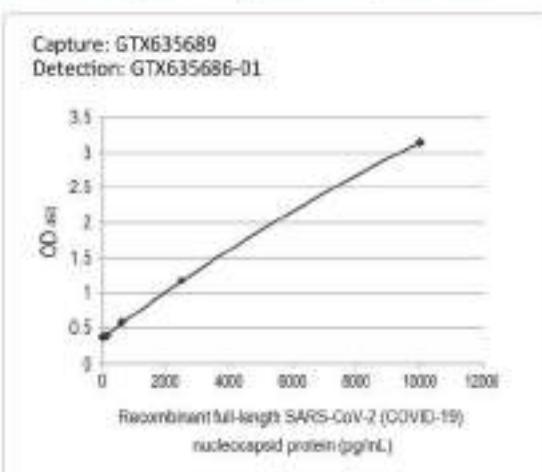
Recombinant antibodies

Extra sensitive: 2.68 pg/ml

GTX500042 SARS-CoV-2 (COVID-19) Nucleocapsid ELISA Pair [HL5410 / HL455-MS]



GTX500045 SARS-CoV-2 (COVID-19) Nucleocapsid ELISA Pair [HL5511 / HL448]



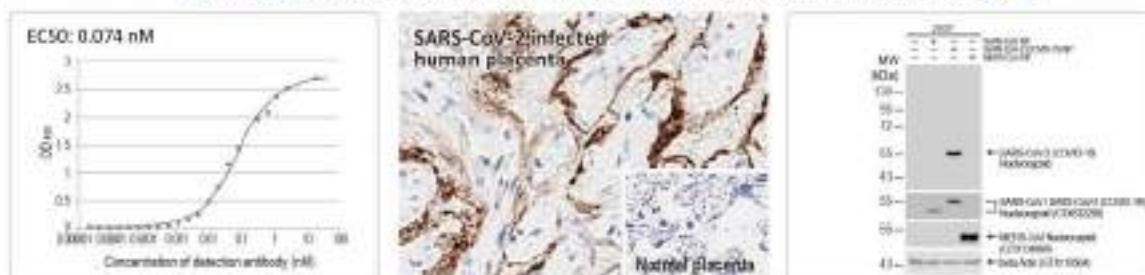
Reagents for SARS-CoV-2 (COVID-19) Research

1.2.2 Recombinant rabbit monoclonal antibodies

Multiple applications

Cross-reactivity validation

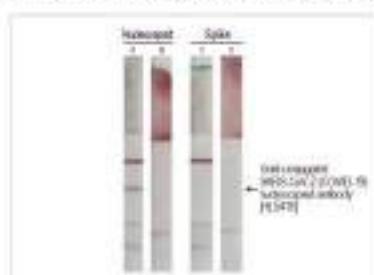
GTX635679 SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL344] ⓘ



GTX635686 SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL448] ⓘ



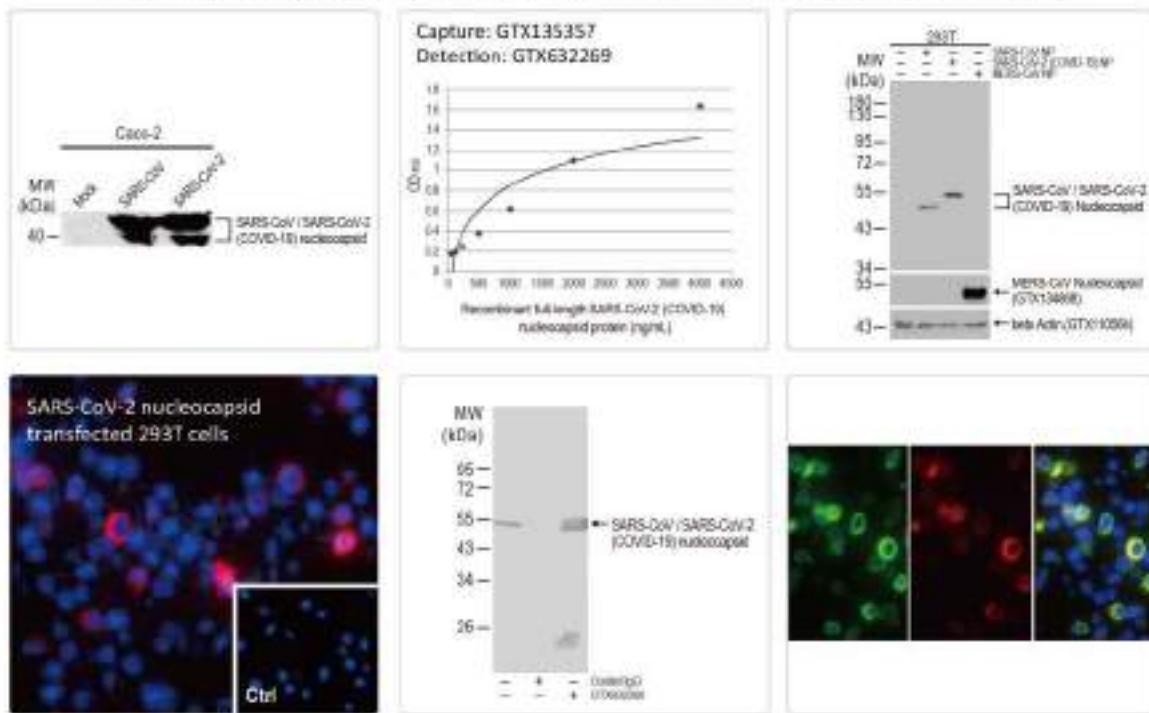
GTX635685-17 SARS-CoV-2 (COVID-19) nucleocapsid antibody [HL5410] (Gold) ⓘ



1.2.3 Mouse monoclonal antibody

- Tested on virus-infected cell lysates
- Multiple applications
- Cross-reactivity validation
- Customer feedback

GTX632269 SARS-CoV / SARS-CoV-2 (COVID-19) nucleocapsid antibody [6H3] Ⓡ



Reagents for SARS-CoV-2 (COVID-19) Research

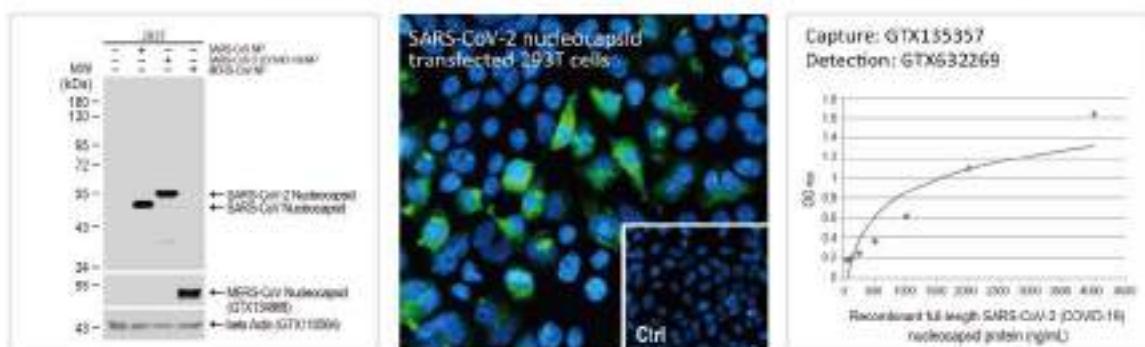
1.2.4 Rabbit polyclonal antibodies

Rabbit polyclonal antibodies

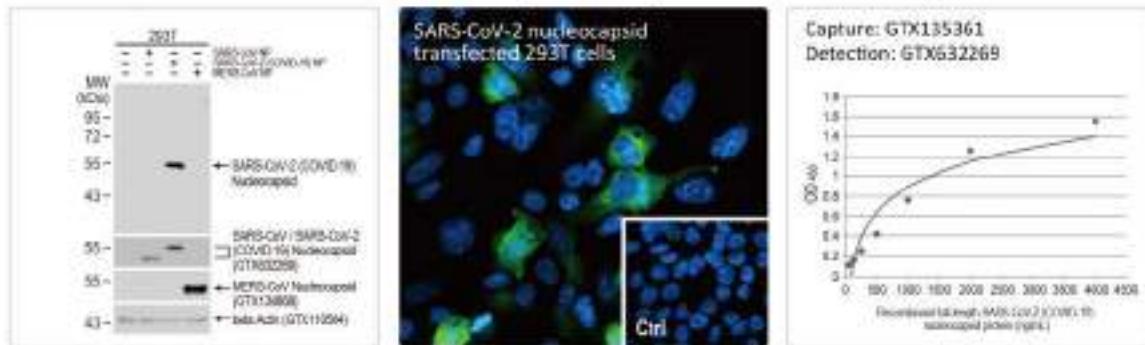
Multiple applications

Cross-reactivity validation

GTX135357 SARS-CoV-2 (COVID-19) nucleocapsid antibody



GTX135361 SARS-CoV-2 (COVID-19) nucleocapsid antibody



 Citation Support

 Protein Overexpression

1.3 Antibodies of other Proteins

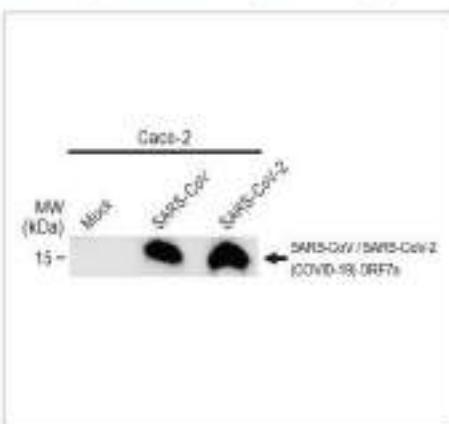
1.3.1 Mouse monoclonal antibodies

Tested on virus-infected cell lysates

Customer feedback

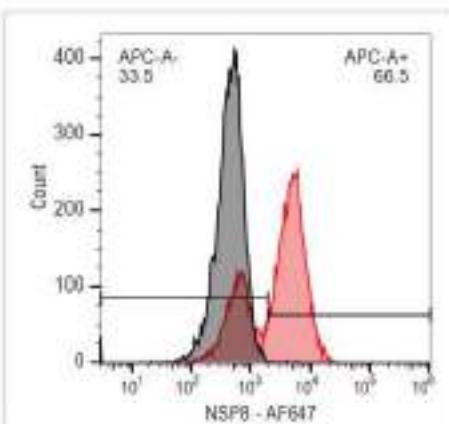
Anti-ORF7a antibody

GTX632602 SARS-CoV / SARS-CoV-2 (COVID-19) ORF7a antibody [3C9] ⓘ



Anti-NSP8 antibody

GTX632696 SARS-CoV / SARS-CoV-2 (COVID-19) NSP8 antibody [5A10] ⓘ



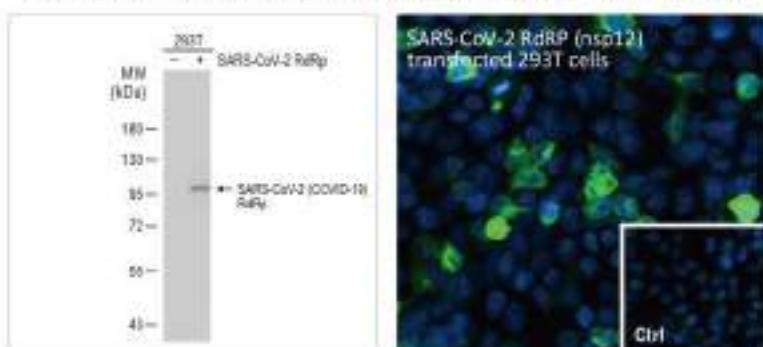
Reagents for SARS-CoV-2 (COVID-19) Research

1.3.2 Rabbit polyclonal antibodies

Multiple applications

Anti-RdRp (nsp12) antibody

GTX135467 SARS-CoV-2 (COVID-19) RdRp (nsp12) antibody



Anti-PLpro (nsp3) antibody

GTX135614 SARS-CoV-2 (COVID-19) PLpro (nsp3) antibody



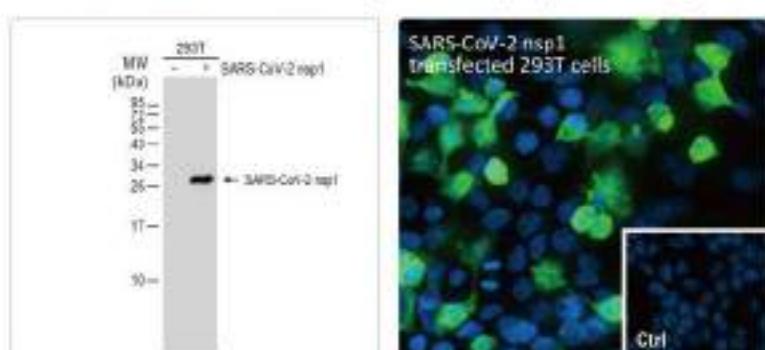
Anti-ORF8 antibody

GTX135591 SARS-CoV-2 (COVID-19) ORF8 antibody



Anti-nsp1 antibody

GTX135612 SARS-CoV-2 (COVID-19) nsp1 antibody

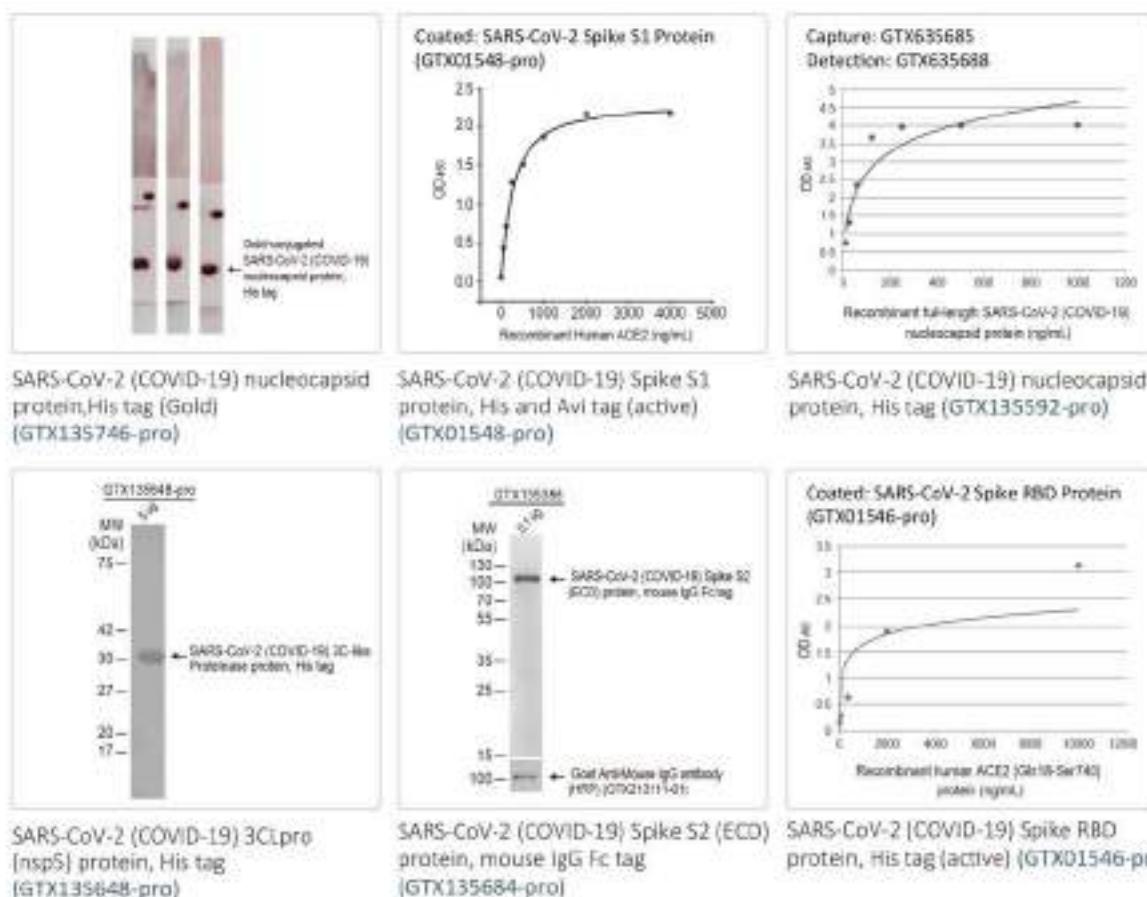


Reagents for SARS-CoV-2 (COVID-19) Research

1.4 Recombinant Proteins for SARS-CoV-2 (COVID-19)

Cat. No.	Product Name	Expression System
GTX01554-pro	SARS-CoV-2 (COVID-19) Spike S1 protein, His tag (active)	HEK293
GTX01548-pro	SARS-CoV-2 (COVID-19) Spike S1 protein, His and Avi tag (active)	HEK293
GTX135684-pro	SARS-CoV-2 (COVID-19) Spike S2 (ECD) protein, mouse IgG Fc tag	HEK293
GTX01559-pro	SARS-CoV-2 (COVID-19) Spike S2 (ECD) protein, human IgG Fc tag	HEK293
GTX01546-pro	SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active)	HEK293
GTX135357-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag	E. coli
GTX135746-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag (Gold)	HEK293
GTX135592-pro	SARS-CoV-2 (COVID-19) nucleocapsid protein, His tag	HEK293
GTX01547-pro	SARS-CoV-2 (COVID-19) Envelope protein, His and Avi tag	E. coli
GTX01585-pro	SARS-CoV-2 (COVID-19) Envelope Protein, GST and His Tag	HEK293
GTX135648-pro	SARS-CoV-2 (COVID-19) 3CLpro (nsp5) protein, His tag	E. coli
GTX01557-pro	SARS-CoV-2 (COVID-19) 3CLpro (nsp5) protein, His and Avi tag	E. coli

Validated for functional assays
Expressed in HEK293 or E. coli



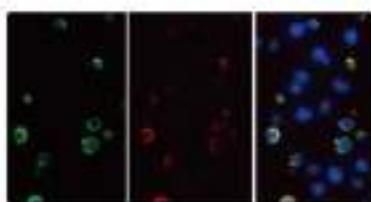


1.5 Cell Pellet Blocks for SARS-CoV-2 (COVID-19)

Cat. No.	Product Name	Applications
GTX435640	SARS-CoV-2 (COVID-19) Spike FFPE 293T cell pellet block	IHC-P (cell pellet)
GTX435643	SARS-CoV-2 (COVID-19) Spike S1 FFPE 293T cell pellet block	IHC-P (cell pellet)
GTX435644	SARS-CoV-2 (COVID-19) Spike S2 FFPE 293T cell pellet block	IHC-P (cell pellet)
GTX435641	SARS-CoV-2 (COVID-19) Nucleocapsid FFPE 293T cell pellet block	IHC-P (cell pellet)
GTX435642	SARS-CoV-2 (COVID-19) Envelope FFPE 293T cell pellet block	IHC-P (cell pellet)
GTX435645	SARS-CoV-2 (COVID-19) Membrane FFPE 293T cell pellet block	IHC-P (cell pellet)



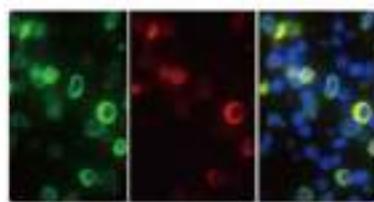
SARS-CoV-2 (COVID-19) Spike FFPE 293T cell pellet block (GTX435640)



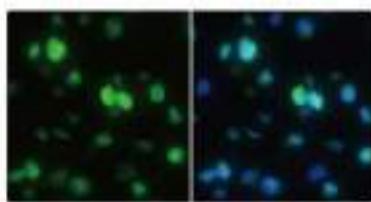
SARS-CoV-2 (COVID-19) Spike S1 FFPE 293T cell pellet block (GTX435643)



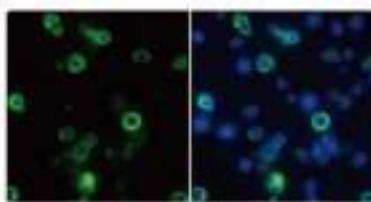
SARS-CoV-2 (COVID-19) Spike S2 FFPE 293T cell pellet block (GTX435644)



SARS-CoV-2 (COVID-19) Nucleocapsid FFPE 293T cell pellet block (GTX435641)



SARS-CoV-2 (COVID-19) Envelope FFPE 293T cell pellet block (GTX435642)



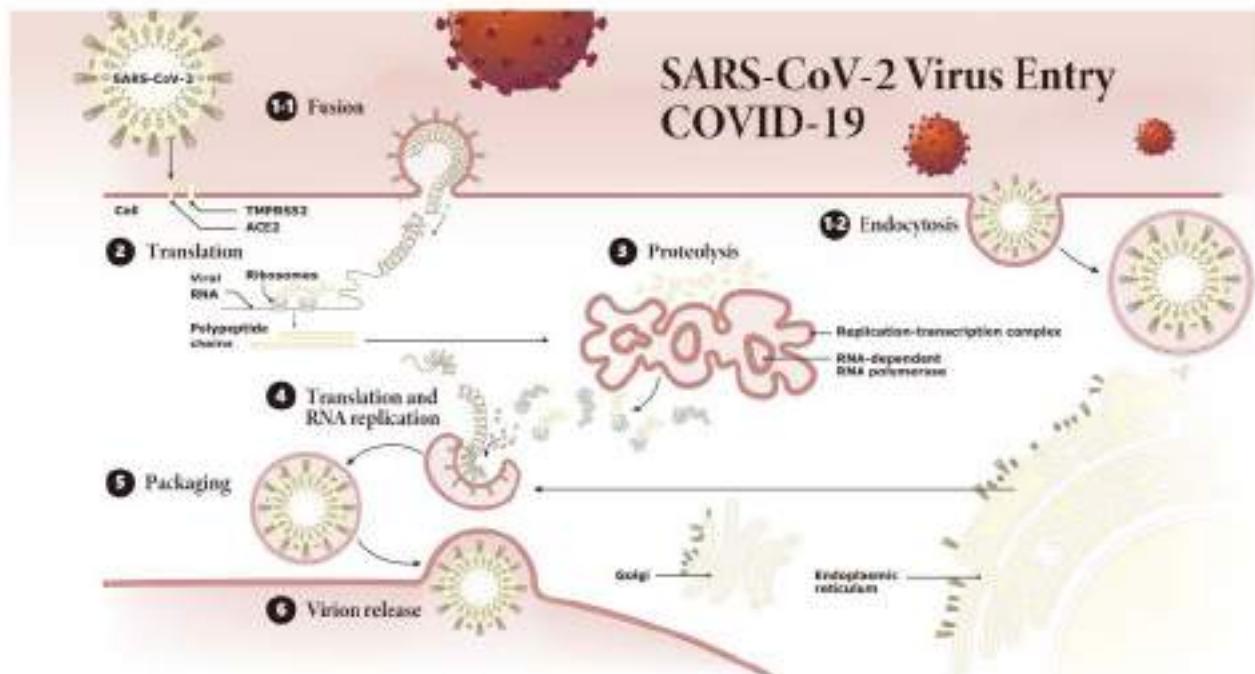
SARS-CoV-2 (COVID-19) Membrane FFPE 293T cell pellet block (GTX435645)

1.6 Overexpression Lysates for SARS-CoV-2 (COVID-19)

Cat. No.	Product Name	Applications
GTX535664	SARS-CoV-2 (COVID-19) Spike overexpression 293T whole cell lysate	WB, ELISA
GTX535663	SARS-CoV-2 (COVID-19) Spike S1 overexpression 293T whole cell lysate	WB
GTX535665	SARS-CoV-2 (COVID-19) Nucleocapsid overexpression 293T whole cell lysate	WB, ELISA
GTX535668	SARS-CoV Spike overexpression 293T whole cell lysate	WB

SARS-CoV-2 (COVID-19) Entry into Host Cells

With SARS-CoV-2 now reaching pandemic status, researchers and clinicians have been working furiously to learn more about the virus's biology and pathogenesis as well as how to treat the more clinically aggressive COVID-19 cases. As with any viral pathogen, understanding how SARS-CoV-2 enters host cells is of great significance.



Angiotensin-converting enzyme 2 (ACE2) is the cellular receptor for SARS-CoV-2, as it is for SARS-CoV. In addition, the serine protease TMPRSS2 is a critical factor for the priming of the SARS-CoV-2 spike (S) protein, an essential step for viral entry into host cells through fusion of the viral and cellular membranes.

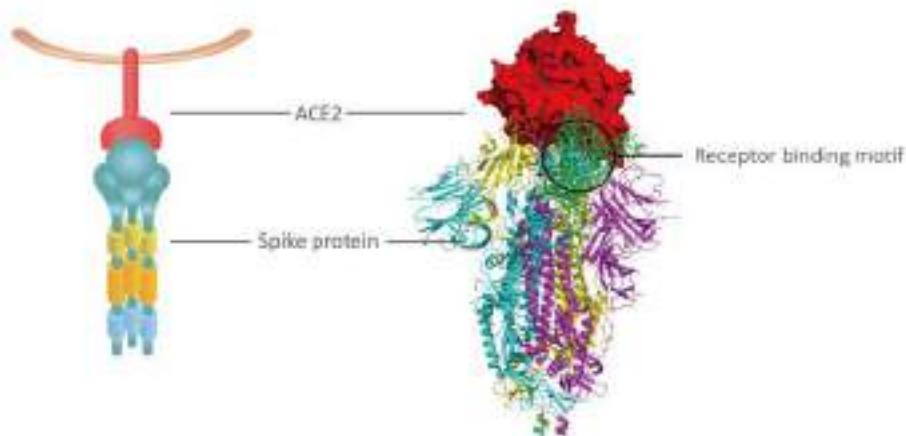


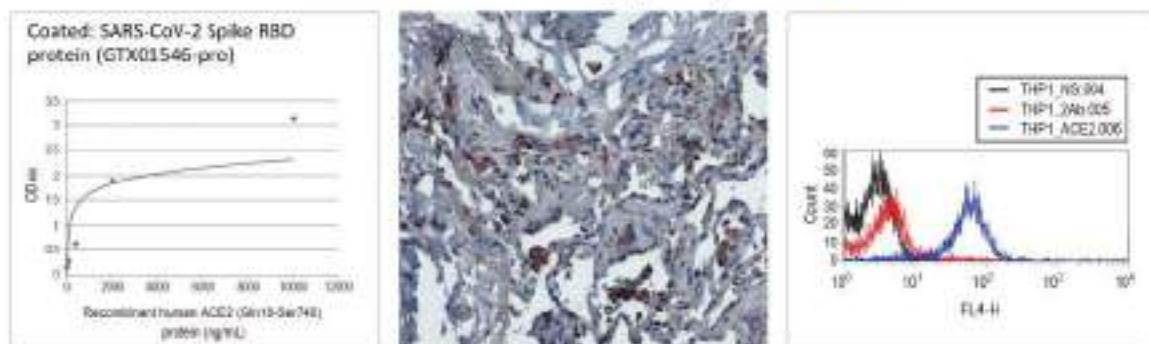
Fig. A putative ACE2 and SARS-CoV-2 spike protein binding model



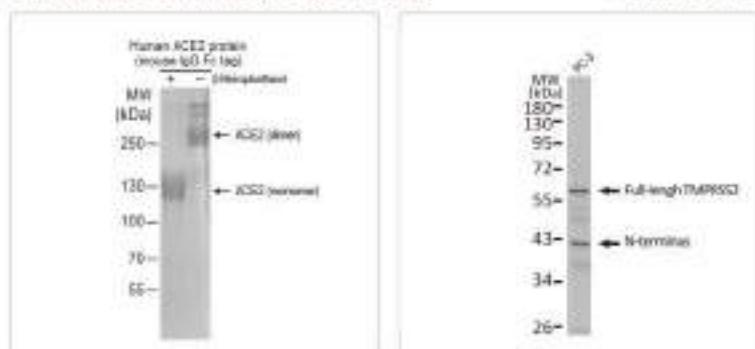
2.1 Products for SARS-CoV-2 (COVID-19) Host Cell Entry Research

Cat. No.	Product Name	Applications
GTX101395	ACE2 antibody [N1N2], N-term	WB, ICC/IF, IHC-P, FACS, ELISA
GTX01160	ACE2 antibody [SNO754]	WB, ICC/IF, IHC-P
GTX15349	ACE2 antibody	WB, ICC/IF, IHC-P, ELISA
GTX135683-pro	Human ACE2(ECD) protein, mouse IgG Fc tag	WB, ELISA
GTX01550-pro	Human ACE2 protein, His and Avi tag	ELISA
GTX100743	TMPRSS2 antibody [N2C3]	WB, IHC-P
GTX01523	Camostat mesylate	TMPRSS2 inhibitor

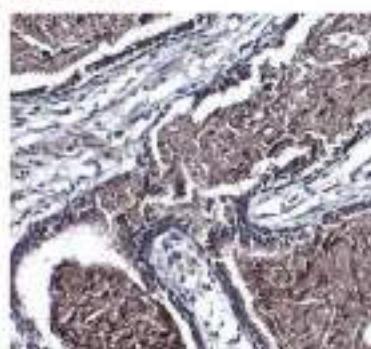
GTX101395 ACE2 antibody [N1N2], N-term



GTX135683-pro Human ACE2(ECD) protein, mouse IgG Fc tag

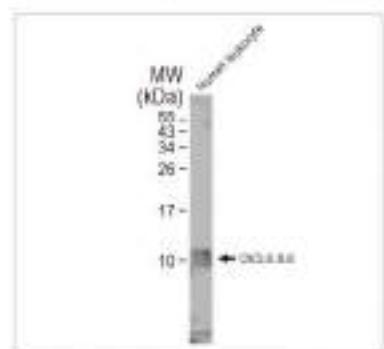
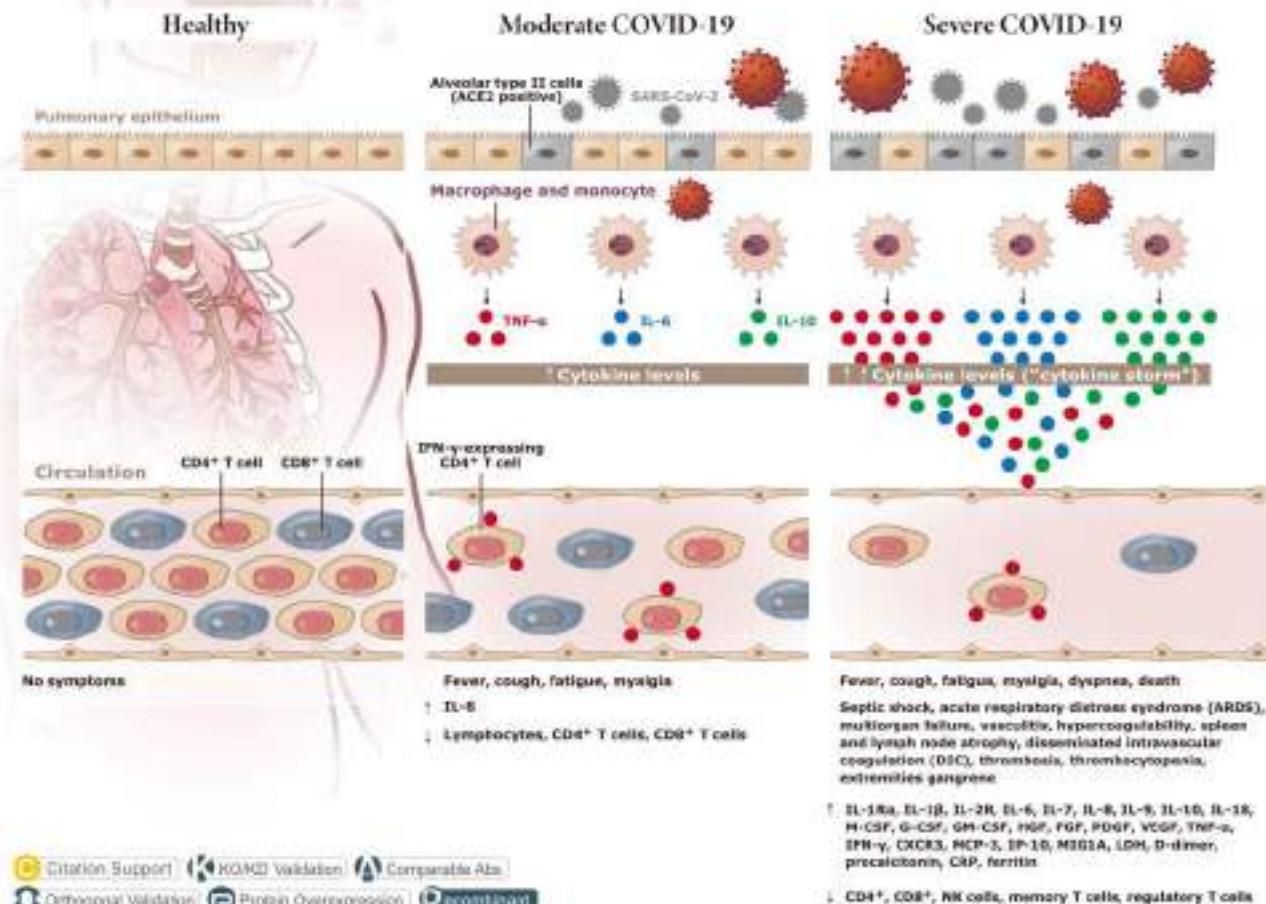


GTX100743 TMPRSS2 antibody [N2C3]

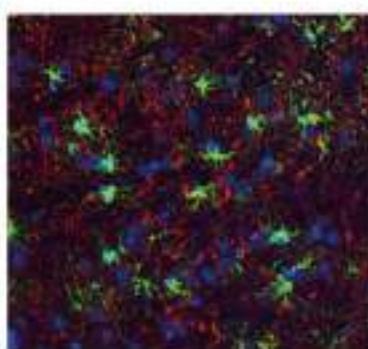


Cytokine Storm

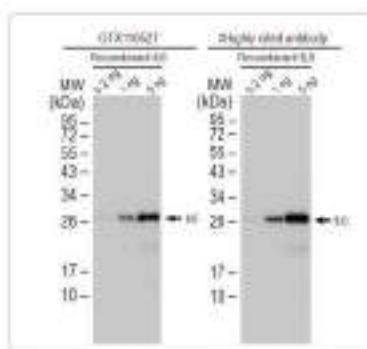
SARS-CoV-2 / COVID-19 pathogenesis is inextricably linked to immune system dysfunction. Hypercytokinemia (or "cytokine storm") is a hyperinflammatory response that can lead to acute respiratory distress syndrome (ARDS) and other systemic complications in COVID-19 patients.



OCL8 / IL8 antibody (GTX115959)



IL1 beta antibody (GTX74034)



IL6 antibody (GTX110527)

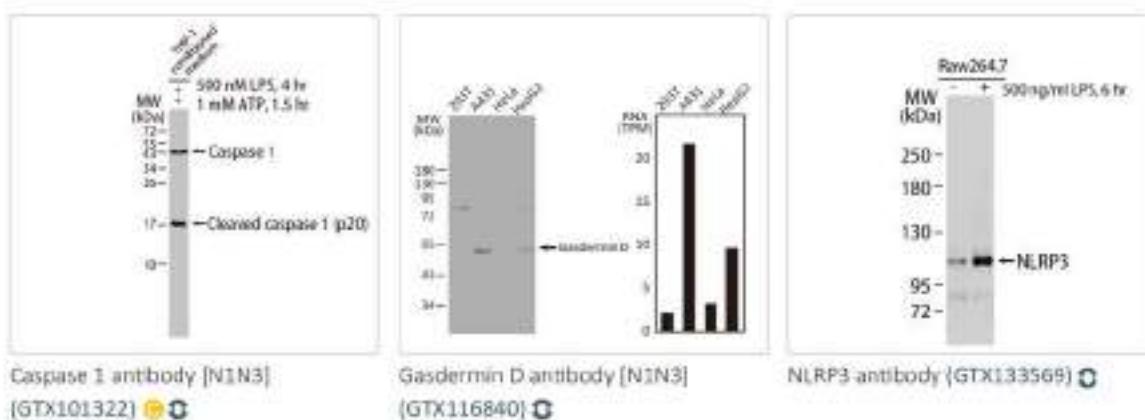
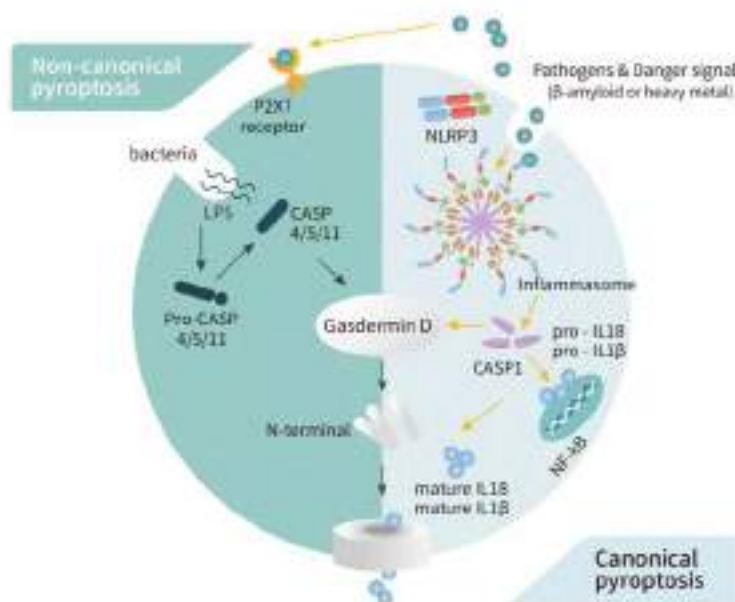
3.1 Antibodies for COVID-19 Cytokine Storm Research

Cat. No.	Product Name	Clonality	Reactivity	Applications
GTX10026	C Reactive Protein antibody [C]	Ms mAb	Hu	WB, ELISA, IHC, Purification, Turbidimetry
GTX101262	C Reactive Protein antibody [N1C3]	Rb pAb	Hu, Rat	WB, IHC-P
GTX31176	CXCL10 / IP10 antibody	Rb pAb	Hu	WB, IHC-P, ELISA, Neutralizing/Inhibition
GTX115959	CXCL8 / IL8 antibody	Rb pAb	Hu	WB, IHC-P, FACS
GTX01155	CXCR3 antibody [JA61-33]	Rb mAb	Hu	WB, ICC/IF
GTX108145	CXCR3 antibody [N1], N-term	Rb pAb	Hu	WB, IHC-P
GTX60943	D-Dimer antibody [28]	Ms mAb	Hu, Dog	WB, ELISA
GTX101005	FGF10 antibody	Rb pAb	Hu, Rat	WB
GTX101007	FGF12 antibody	Rb pAb	Ms	WB
GTX101008	FGF13 antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P
GTX130346	FGF14 antibody	Rb pAb	Hu	WB, ICC/IF
GTX128496	FGF18 antibody	Rb pAb	Hu	WB
GTX01054	FGF21 antibody [JA10-97]	Rb mAb	Hu, Ms, Rat	WB, IHC-P
GTX111877	FGF21 antibody [N3C3]	Rb pAb	Hu	WB, ICC/IF, IHC-P
GTX31157	G-CSF antibody	Rb pAb	Hu	WB, IHC-P, ELISA, Neutralizing/Inhibition
GTX59748	GM-CSF antibody	Rb pAb	Hu	WB, Neutralizing/Inhibition
GTX129003	HGF (alpha subunit) antibody	Rb pAb	Hu	WB
GTX111810	HGF antibody	Rb pAb	Hu	WB
GTX74034	IL1 beta antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/IF, IHC-P, IHC-Fr, ELISA, IHC
GTX634188	IL1 beta antibody [GT289]	Ms mAb	Hu	WB, ICC/IF
GTX130513	IL10 antibody	Rb pAb	Hu, Ms	WB, IHC-Fr, ELISA
GTX632359	IL10 antibody [GT5111]	Ms mAb	Hu, Ms, Rat	WB, IHC-P
GTX32675	IL-18 antibody	Rb pAb	Hu, Ms	WB, IP
GTX110527	IL6 antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P, IHC-Fr
GTX131448	IL7 antibody	Rb pAb	Hu	WB
GTX51537	IL9 antibody	Rb pAb	Ms, Rat	WB, IHC-P
GTX15624	Interferon gamma antibody [2G1]	Ms mAb	Hu, Ms	WB, ELISA, sELISA
GTX101416	LDHA antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/IF, IHC-P
GTX101747	LDH-B antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/IF, IHC-P
GTX110520	TNF alpha antibody	Rb pAb	Hu, Ms, Rat, Bov	WB, ICC/IF, IHC-P
GTX102643	VEGF antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P
GTX21318	VEGF antibody [VG1]	Ms mAb	Hu, Ms, Rat	WB, ICC/IF, IHC-P, IHC-Fr, ELISA



Pyroptosis

Pyroptosis is a programmed cell death process executed by inflammatory caspases upon initiation of canonical or non-canonical mechanisms. It is triggered by specific inflammatory caspases (caspase-1, -4, -5, -11) that are distinct from those responsible for apoptosis. Both the canonical and non-canonical pathways lead to the activation of gasdermin D (GSDMD), which forms pores that cause cellular leakage and lysis. The resultant extracellular release of cytoplasmic components unleashes a local inflammatory cascade that can become systemic, underscoring the importance of pyroptosis' normal function in mobilizing immune cells against pathogens. Nevertheless, pyroptosis can also contribute to inflammation-related pathology, including cancer progression and autoimmune disease.

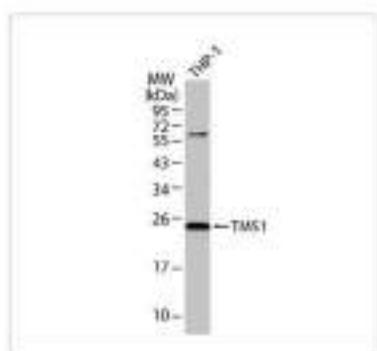


Citation Support | KO/ND Validation | Comparable Abs | PMS Analysis | Orthogonal Validation | Protein Overexpression

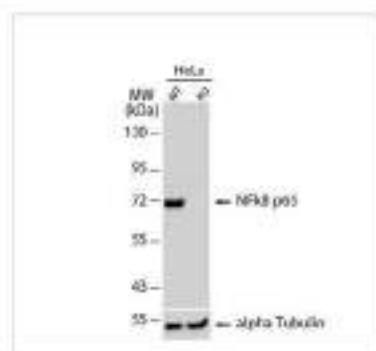


4.1 Antibodies for Pyroptosis Research

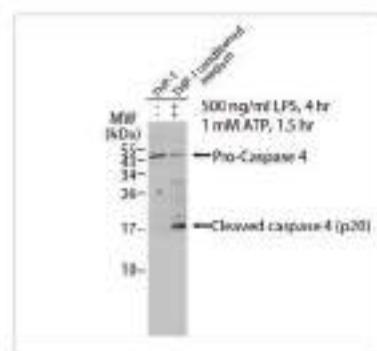
Cat. No.	Product Name	Clonality	Reactivity	Applications
GTX136487	AIM2 antibody	Rb pAb	Hu	WB
GTX102366	CARD12 antibody [N1], N-term	Rb pAb	Hu	WB
GTX133447	Caspase 1 (cleaved Asp297) antibody	Rb pAb	Hu	WB
GTX14367	Caspase 1 antibody [14F468]	Ms mAb	Hu, Ms, Rat	WB, IHC-P, FACS
GTX101322	Caspase 1 antibody [N1N3]	Rb pAb	Hu, Ms	WB, ICC/F, IHC-P
GTX123675	Caspase 1 p10 subunit antibody	Rb pAb	Hu, Ms, Rat	IHC-P
GTX134551	Caspase 1 p10 subunit antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P
GTX11701	Caspase 1 p20 subunit antibody	Rb pAb	Ms, Rat	WB
GTX10454	caspase 11 antibody [17D9]	Rb mAb	Ms	WB, IHC-Fr, IP
GTX134552	caspase 4 antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P
GTX113639	caspase 4 antibody	Rb pAb	Hu	WB, IHC-P
GTX31701	caspase 5 antibody	Rb pAb	Hu, Ms	WB, ICC/F, ELISA
GTX116840	Gasdermin D antibody [N1N3]	Rb pAb	Hu	WB
GTX74034	IL1 beta antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/F, IHC-P, IHC-Fr, ELISA, IHC
GTX634188	IL1 beta antibody [GT289]	Ms mAb	Hu	WB, ICC/F
GTX32675	IL-18 antibody	Rb pAb	Hu, Ms	WB, IP
GTX22549	NAIP antibody	Rb pAb	Hu	WB
GTX108216	NEK7 antibody [C2C3], C-term	Rb pAb	Hu, Ms	WB, ICC/F, IHC-P
GTX101150	NFKB p100 antibody [C2C3], C-term	Rb pAb	Hu, Ms	WB, IP
GTX10585	NFKB p105 antibody	Rb pAb	Hu, Ms	WB, ICC/F, IHC-P, ChIP assay, IHC
GTX107578	NFKB p65 antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/F, IHC-P, IP, EMSA
GTX133569	NLRP3 antibody	Rb pAb	Hu, Ms	WB
GTX16827	P2X7 antibody	Rb pAb	Hu, Ms, Rat	WB, ICC/F, IHC-Fr, FACS, LCI
GTX31510	Parinexin 1 antibody	Rb pAb	Hu, Ms, Rat	WB, IHC-P, ELISA
GTX102474	TM51 antibody [N1C3]	Rb pAb	Hu	WB, ICC/F, IHC-Fr



TM51 antibody [N1C3]
(GTX102474)



NFkB p65 antibody
(GTX107678)



Caspase 4 antibody
(GTX134552)

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