



## SARS-CoV-2 Products

- Rapid tests
- ELISA IVD & Research
- Assays
- Antibodies
- Viral Proteins
- Inflammatory Proteins
- Multiplex Assay & Cytokine Service
- Inhibitors
- Lectins
- Pentamers
- Isolation & Extraction
- RT-qPCR



OTC AND SELF TESTING  
ALLERGOLOGY  
LAB PRODUCTS  
PROFESSIONAL DEVICES  
VETERINARY  
MEDICAL SUPPLIES  
SCIENTIFIC PRODUCTS

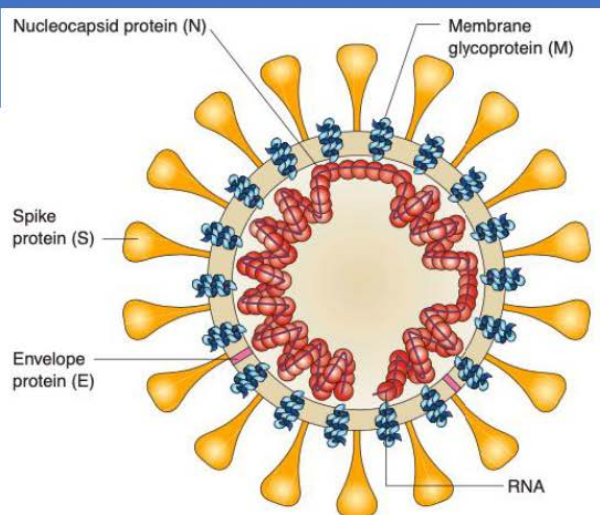
# Coronavirus (CoV)

Coronaviruses belong to the subfamily of *Orthocoronavirinae* in the family *Coronaviridae*, in the order *Nidovirales*. They are enveloped viruses with a positive-sense single-stranded RNA genome and a nucleocapsid of helical symmetry.

To date, six CoVs have been identified to infect humans: HCoV-229E, HCoV-OC43, HCoV-NL63, HCoV-HKU1, severe acute respiratory syndrome coronavirus (SARS-CoV), and the Middle East respiratory syndrome coronavirus (MERS-CoV).

The first case of novel coronavirus (SARS-CoV-2)-infected pneumonia (NCIP) occurred in Wuhan, Hubei Province, China, in December 2019. NCIP is the seventh coronavirus.

## Structure of SARS



- The viral surface proteins (spike, envelope and membrane) are embedded in a lipid bilayer envelope derived from the host cell.
- The single-stranded positive-sense viral RNA is associated with the nucleocapsid protein.

Fig.2 Schematic diagram of the SARS structure. (Peiris, 2004)

## Overview of SARS-CoV-2

The novel coronavirus (SARS-CoV-2) occurred in Wuhan, Hubei Province, China in December of 2019 has resulted in thousands of people of lethal disease in China, and more and more patients are identified in the world. This novel coronavirus was reported to share the same receptor, angiotensin-converting enzyme 2 (ACE2), similar with SARS-CoV.

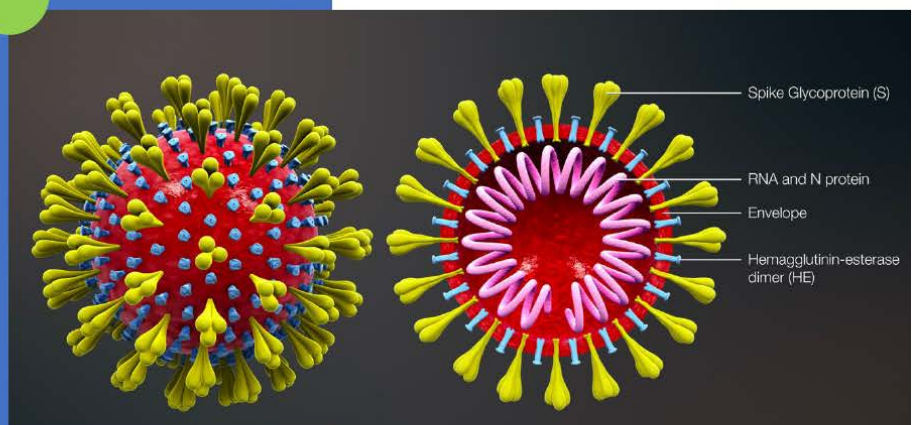
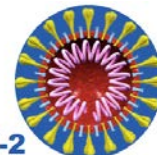


Fig.4 Image of SARS-CoV-2.



# Rapid tests

SARS-CoV-2



## MP Rapid 2019-nCoV IgG/IgM Combo Test



Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in 2019. The virus causes a respiratory illness (comparable to the flu) with the symptoms of cough and fever. In more severe cases, pneumonia can occur. MP Bio now offers a rapid diagnostic test detecting IgG and IgM antibodies of COVID-19.

- **RAPID AND CONVENIENT:** Results in 15 minutes, requires no instruments
- **DETECTION OF DIFFERENT CLINICAL STAGES:** Infection time can be roughly judged, IgG and IgM
- **SPECIMENS:** Whole Blood, Serum and Plasma can be used, easy sampling and reliable, only 2µl sample needed
- **STORAGE:** room temperature, 18 months shelf life



Simple to use - only 3 steps



Apply 2µL of blood specimen to the "S1" area as marked.



Add 2 drops of sample buffer to well marked as "S".



Read the result at 15 minutes.



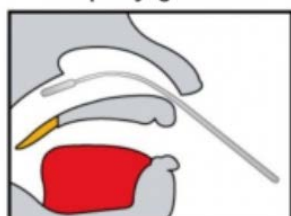
Description	Cat. No.	Format	Pack size	Specificity	Sensitivity	Accuracy
MP RAPID 2019-NCOV IGG/IGM COMBO TEST CARD	07RDCOV19	Cassette	25 tests/box	99.0 % 305/302	87.8 % 74/65	96.8 % 379/367



## BIOCREDIT COVID-19 AG (Antigen) Detection kit

### One Step SARS-CoV-2 Antigen Rapid Test kit

Nasopharyngeal Swab



1 Test ( 1stick)



1 KIT (20Test)

- ❖ **KIT CONTENTS**
  - ✓ Each test device sealed in a foil-pouch with a desiccant
  - ✓ Assay diluent tube
  - ✓ Filter cap
  - ✓ Instructions for Use ( IFU)
  - ✓ Sterilized swab for nasopharyngeal specimen collection

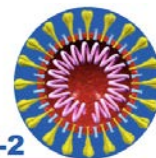
#### ❖ Order Information

Cat no.	Product	Size
G61RHA20	BIOCREDIT COVID-19 Ag Detection kit	20Tests



# Serologic ELISA IVD

SARS-CoV-2



An Innovative Diagnostics Test Designed by WANTAI



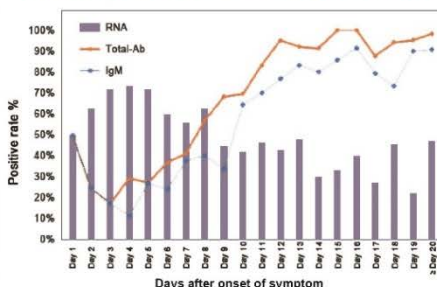
## Diagnostic kits for SARS-CoV-2 Virus (COVID-19)

\* Total Ab ELISA CE \* IgM ELISA CE



Beijing WANTAI Biological Pharmacy Enterprise Co., Ltd.

## Virological and serological markers of COVID-19



\* Wantai Total antibody ELISA is intended for screening as a supplementary test to PCR, and monitoring of recovered patients

\* Wantai IgM antibody ELISA is a supplementary test to PCR negative samples.

## Sensitivity and Specificity of Wantai Diagnostics

Ab ELISA IgM ELISA

Sensitivity 94.5% (293/310) 86.8% (269/310)  
Specificity 100% (333/333) 100% (333/333)

CE-IVD

## Ordering Info

Cat.	Product	Detection	Specimen	Pack size
WS-1096	SARS-CoV-2 Ab ELISA	Total Ab	Serum/Plasma	96T/kit
WS-1196	SARS-CoV-2 IgM ELISA	IgM Ab	Serum/Plasma	96T/kit

de  
medi  
tec

## Now available: COVID-19 (SARS-CoV-2) ELISAs

COVID-19 (SARS-CoV-2) IgG - DECOV1901  
COVID-19 (SARS-CoV-2) IgA - DECOV1902

## Following characteristics come along with these kits:

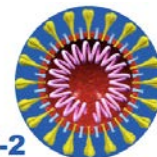
- ✓ CE-marked
- ✓ fast results (< 2 hours)
- ✓ Separate detection of IgG and IgA antibodies
- ✓ suitable for open ELISA systems

CE-IVD

ITALIA S.p.A. DBA

# ELISA for Research

SARS-CoV-2



**Supporting the fight vs Covid-19-Helping Targeted Protein Degradation Research**

Catalog No. C19SD-876



SignalChem's 2019-nCoV (SARS-CoV-2) S1 Protein ELISA Kit detects and quantifies SARS-CoV-2 spike protein in biological and/or recombinant samples using the immobilized ACE2 protein on the surface of 96-well plates.

**An alternatively possible application could be the environment monitoring (e.g. antigen would also be on the surfaces of places where people have sneezed)**



**ELISA KITS Targets in Virus Infection**

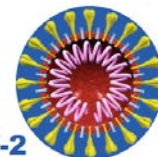
***Cloud-Clone Corp.***

SEB886Hu	ELISA Kit for Angiotensin I Converting Enzyme 2 (ACE2)
SEB540Hu	ELISA Kit for Cluster Of Differentiation 147 (CD147)
SEC795Hu	ELISA Kit for Transmembrane Protease, Serine 2 (TMPRSS2)

Also available ELISA Targets in Cytokine Storm.







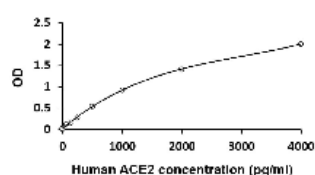
## • ELISA kits for ACE2 research

### ACE2 shedding

Human ACE2 ELISA Kit  
(ARG80959)

**Sensitivity:** 31 pg/ml

**Sample:** Serum, plasma, cell culture supernatant

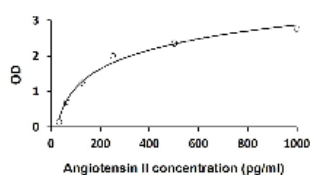


### ACE2 deficiency

Human Angiotensin II ELISA Kit  
(ARG80961)

**Sensitivity:** 2 pg/ml

**Sample:** Serum, plasma, cell culture supernatant, homogenate

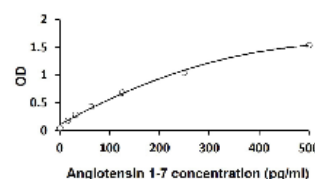


### ACE2 deficiency

Human Angiotensin 1-7 ELISA Kit  
(ARG80960)

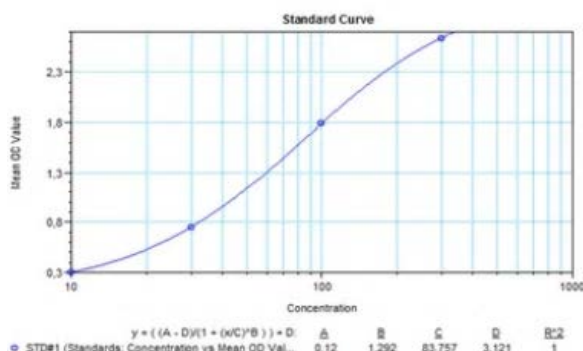
**Sensitivity:** 2 pg/ml

**Sample:** Serum, plasma, cell culture supernatant

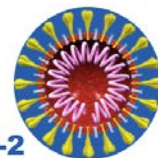


## COVID-19 ELISA Kits:

- COVID-19 (IgM) ELISA Kit
- COVID-19 (IgG) ELISA Kit
- Tocilizumab ELISA Kit



Tocilizumab (Actemra®) ELISA Kit



BPS Bioscience has developed innovative assays and screening methods to enable a wide range of preclinical activities for investigating potential COVID-19 antiviral drugs.

## Screening Assay Formats

SCREENING ASSAY KIT	PROTOCOL				BPS #
ACE2:Spike S1-Biotin (SARS-CoV-2) <i>Chemiluminescent</i>	 ACE2	 SPIKE -Biotin	 STREP -HRP	 HRP Substrate	79945
ACE2: Spike RBD (SARS-CoV-2) <i>Chemiluminescent</i>	 ACE2	 SPIKE	 Anti-Fc -HRP	 HRP Substrate	79936
Spike RBD (SARS-CoV-2) : ACE2 <i>Chemiluminescent</i>	 SPIKE	 ACE2	 Anti-HIS -HRP	 HRP Substrate	79931
Spike S1 (SARS-CoV-2): ACE2 <i>Colorimetric</i>	 SPIKE	 ACE2 -Biotin	 STREP -HRP	 HRP Substrate	79954
Spike S1-Biotin(SARS-CoV-2):ACE2 <i>TR-FRET</i>	 ACE2-EU Dye Labeled Acceptor	 SPIKE -Biotin	 FRET	 Blocking Compound	79949
ACE2 or 3CL <i>Fluorogenic</i>	 ACE2 or 3CL	 Inhibitor	 Fluorogenic Substrate		79923 79955

## ACE2-Coronavirus Receptor Assay Kits

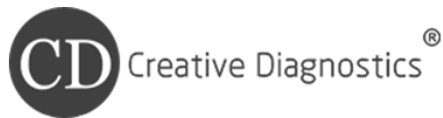
- For Measuring ACE2 activity or Screening ACE2 inhibitors
- Sensitive, Non-radioactive plate based assays
- Simple, Rapid & Convenient
- 100 assays & High Throughput Adaptable
- For Research Use Only





## Inhibitor Screening Kit

ACRO has developed the 2019-nCoV inhibitor screening kit based on the biotinylated ACE2 protein and 2019-nCoV S protein RBD. This inhibitor screening ELISA pair is designed to facilitate the identification and characterization of 2019-nCoV inhibitors for development studies for vaccines, therapeutic antibodies and small molecular compounds against COVID-19.



## SARS-CoV-2 Pseudovirus Neutralization Assay

SARS-CoV-2 pseudovirus neutralization assay has potential applications in the diagnosis, prophylaxis, and treatment of SARS-CoV-2.

At present, we have successfully developed a SARS-CoV-2 pseudovirus with HIV lentiviral vector. The Luciferase luminescence value reaches 106 RLU after the pseudovirus infection, which can meet the

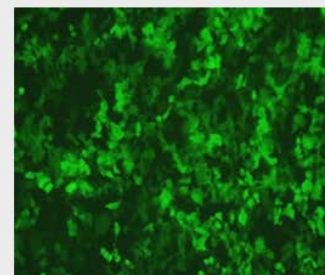


### Pseudotyped Luciferase rSARS-CoV-2 Spike

Pseudotyped Luciferase rSARS-CoV-2 Spike is a replication-restricted, recombinant pseudotyped lentiviral particles containing SARS-CoV-2 spike protein. Because the infectivity of Pseudotyped Luciferase rSARS-CoV-2 is restricted to a single round of replication, the pseudotypes can be handled using BSL-2 containment practices.

### Human ACE2 Stable Cell Line - HEK293T

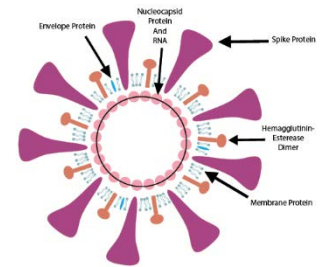
This cell line is constructed by transducing human angiotensin I converting enzyme 2 (ACE2) into HEK293T cells, followed by stable cell selection. HEK293T is derived from HEK293 and is commonly used in scientific research. HEK293T-human ACE2 cell line can be used for *in vitro* screening and characterization of drug candidates against SARS-CoV and SARS-Cov2 (2019-nCoV).







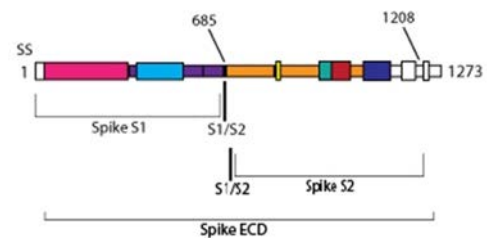
## SARS-COV-2 Antibodies



### SARS-CoV-2 (COVID-19) Antibody

Our comprehensive selection of antibodies include polyclonal, monoclonal and single domain antibodies for SARS-Cov-2 structural and non structural proteins. We have an extensive portfolio of antibodies against SARS-CoV-2 structural proteins for SARS-CoV-2 spike glycoprotein protein and its subunits spike S1 protein, spike S1 RBD, spike S2, spike ECD and more. In addition, we have a line of humanized antibodies for diagnostic research and ELISA pair development purposes.

- ✓ SARS-CoV-2 **Spike S1** Antibody
- ✓ SARS-CoV-2 **Spike RBD** Antibody
- ✓ SARS-CoV-2 **Spike S2** Antibody
- ✓ SARS-CoV-2 **Spike ECD** Antibody
- ✓ SARS-CoV-2 **Nucleoprotein** Antibody
- ✓ SARS-CoV-2 **Envelope** Antibody
- ✓ SARS-CoV-2 **Membrane** Antibody
- ✓ SARS-CoV-2 **pp1ab** Antibody
- ✓ SARS-CoV-2 **ORF10** Antibody



- ✓ **Humanized Antibodies**

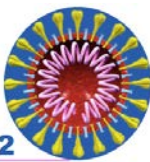


## SANTA CRUZ Antibodies Covid

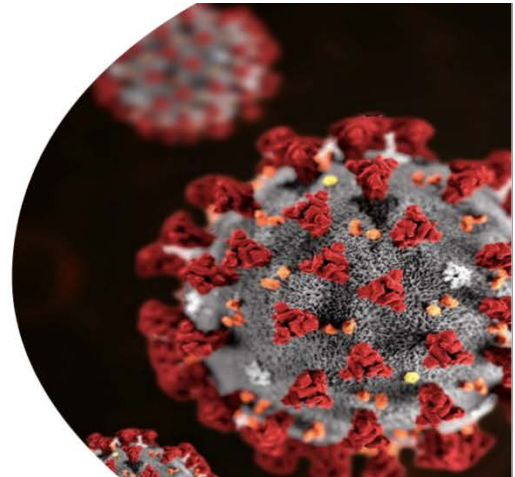
<b>ACE2 Antibody (E-11)</b>	<b>sc-390851</b>	recommended for detection of ACE2 of mouse, rat and human origin by WB, IP, IF, IHC(P) and ELISA
<b>Coronavirus Antibody (FIPV3-70)</b>	<b>sc-65653</b>	recommended for detection of Coronavirus by WB, IF and IHC(P)
<b>TMPRSS2 Antibody (H-4)</b>	<b>sc-515727</b>	recommended for detection of TMPRSS2 catalytic chain of mouse, rat and human origin by WB, IP, IF, IHC(P) and ELISA

# Antibodies

SARS-CoV-2



## ANTIBODIES FOR CORONAVIRUSES



### ❖ Therapeutic Antibodies

- Recombinant human anti-SARS-CoV monoclonal antibody binds to spike protein associated with SARS-CoV and can be **potentially used in the diagnosis and treatment of SARS-CoV infection.**

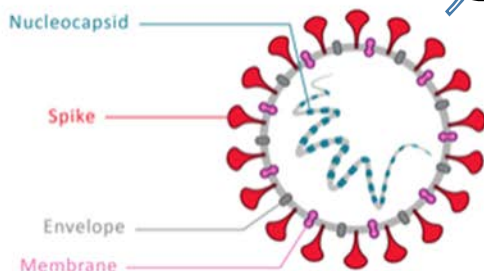
### Recombinant Antibodies

- Recombinant Mouse Antibody scFv Fragment raises against **SARS-CoV NP, SARS-CoV S, SARS-CoV E2**

**biorbyt**



As part of our comprehensive Infectious disease portfolio, Biorbyt is able to offer a range of **primary antibodies and antigens to Coronavirus**, validated for use in applications from ELISA and Western Blot to Lateral flow and ImmunoPrecipitation.



Spike antibodies

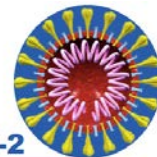
ACE2 and TMPRSS2 antibodies

Nucleocapsid protein antibodies

The newly identified coronavirus, SARS-CoV-2 (previously known as 2019-nCoV) shares 79.5% sequence identity with SARS-CoV. The viral genome encodes spike, envelope, membrane, nucleocapsid, and multiple non-structural proteins. Arigo offers quality antibodies and proteins to facilitate the research of SARS-CoV-2.

# Viral Proteins

SARS-CoV-2



Spike (S)

Glycoprotein

Envelope (E) protein

Membrane (M) protein

Nucleocapsid (N) protein

3CL Protease (Mpro)



## Interaction Proteins

CAT.NO.	PRODUCT NAME	IDENTITY	SPECIES	SOURCE
ACE2-736H	Recombinant Human ACE2, His-tagged	ACE2-His	Human	HEK293
ACE2-68H	Recombinant Human ACE2, Fc-tagged	ACE2-hFc	Human	HEK293
ACE2-185H	Recombinant Human ACE2, mouse IgG1 Fc-tagged	ACE2-mFc	Human	HEK293
TMPRSS2-1856H	Recombinant Human TMPRSS2 Protein (106-492 aa), His-tagged	TMPRSS2-His	Human	Yeast
TMPRSS2-4899H	Recombinant Human TMPRSS2, his-tagged	TMPRSS2-His	Human	HEK293
ACE2-229H	Recombinant Human ACE2 protein, His/Avi-tagged	ACE2-His/Avi	Human	Mammalian cells

### Druggable Targets

BRD2	BRD4	CSNK2A2	HDAC2	ATP6AP1	SIGMAR1	TMEM97	COMT
PTGES2	NDUFS1	NDUFS2	NDUFS3	NDUFS4	NDUFS5	NDUFS6	NDUFS7
NDUFS8	RIPK1	PRKACA	IMPDH2	GLA	DNMT1	LOX	MARK2
MARK3	DCTPP1	TBK1	F2RL1	ABCC1	LARP1	FKBP15	FKBP10
FKBP7	EIF4E2	RAE1	NEK9	CEP250	CUL2		

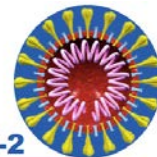
## Corona Virus Proteins

- ❖ Spike
- ❖ 3CL
- ❖ Envelope
- ❖ NS and more over



# Viral Proteins

SARS-CoV-2



## COVID-19 Related Products

NOW AVAILABLE FOR YOUR RESEARCH NEEDS

Name	Catalog Number	Activity	Species	Tag	Expression System	Sequence	Genbank Number
2019-nCoV PLpro, Active	C19PL-G241H	Activity Assay, Inhibition Profile	Virus	HIS	E.coli	1564-1882	QHD43415
2019-nCoV RdRp, Active	C19RP-G241H	Activity Assay	Virus	HIS	CHO cells	Full length	QHD43415
2019-nCoV Spike protein RBD	C19SD-G241H	ELISA, FACS	Virus	HIS	CHO cells	319-541	MN908947
2019-nCoV Spike protein RBD	C19SD-G241F	ELISA, FACS	Virus	Fc	CHO cells	319-541	MN908947
2019-nCoV Spike protein S1	C19S1-G241F	FACS	Virus	Fc	CHO cells	16-685	MN908947
2019-nCoV Spike protein S1	C19S1-G241H	FACS	Virus	HIS	CHO cells	16-685	MN908947
ACE2 (18-615) Protein	A51C2-G342F	ELISA	Human	Fc	CHO cells	18-615	AF291820
ACE2 (19-740) Protein	A51C2-G341F	Activity Assay, ELISA	Human	Fc	CHO cells	19-740	AF291820
Anti-2019-nCoV Spike (mFc)	C19S1-61MH	ELISA	Human		CHO cells		
Anti-2019nCoV Spike Protein	C19S1-61H	ELISA, FACS	Human, IgG1		CHO cells		
Anti-Human IgG, Unconjugated	H38-60M		Mouse, IgM				
Anti-Human IgM, Unconjugated	H38M-60M		Mouse, IgG				
Cas12 (LbCpf1) Protein	C12CR-G241H		Lachnospiraceae	HIS	E.coli	1-1227	ATB19154
Cas12(LbCpf1) Protein	C12CR-G241G		Lachnospiraceae	GST	E.coli	1-1227	ATB19154
CD147 (22-205) Protein	C81D7-G651F	ELISA	Human	Fc	CHO cells	22-205	NM_198589
METTL16, Active	M336-380G	Activity Assay	Human	GST	Sf9 insect cells using baculovirus	Full length	NM_024086
METTL3/METTL14, Active	M323-380G	Activity Assay	Human	GST	Sf9 insect cells using baculovirus	Full Length	NM_019852
Proteinase K, Active (MBG)	P535-30N		Parengyodontium		Yeast cells		



Recombinant Proteins  
for Biopharma Industry

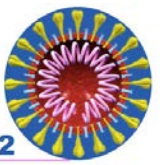
### Mutant SARS-CoV-2 RBD proteins

- RBD-ACE2 binding affinity verified by ELISA/SPR/BLI.
- Protocol offered for free.

ACE2 S S1 SRBD N .....

# Inflammatory Proteins

SARS-CoV-2



**proteintech**<sup>TM</sup>

Antibodies | ELISA kits | Proteins

## Reagents to support your COVID-19 research



### Cytokine and Immune response products

## HUMANKINE<sup>®</sup> ACTIVE CYTOKINES AND GROWTH FACTORS

- ✓ Human cell-expressed
- ✓ Free of animal components
- ✓ Endotoxin-free
- ✓ Higher activity and stability
- ✓ Native post-translational modifications and folding



OUR SUPPORT, YOUR DISCOVERY

GMP  
Cytokines

RUO Cytokines

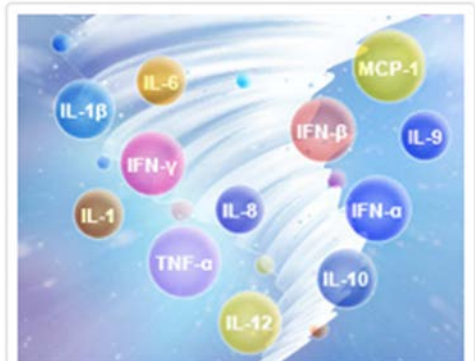
Growth  
Factors &  
Cytokines

Animal-Free  
Cytokines

Chemokines



Your Good Partner in Biology Research



### COVID-19 Cytokine Storm

COVID-19 cytokine storm actually refers to the cytokine storm caused by COVID-19 (a disease caused by SARS-CoV-2 infection).





# Multiplex assay and Cytokine Service



## GeniePlex: Quantitatively Measure 1-24 Analytes Simultaneously!

GeniePlex is a bead-based multiplex immunoassay technology. It enables the simultaneous & quantitative detection of up to 24 analytes in as little as 15 µl sample on almost any flow cytometer. It's like doing 24 different ELISA in every well!

### Phenomenal Performance

**Very Sensitive:** Measure as low as <10 pg/ml of each analyte

**Excellent Dynamic Range:** Lower limit < 20 pg/mL | Upper limit > 5,000 pg/mL

**High Precision & Accuracy:** Intra-assay CV: < 10% | Inter-assay CV: < 20% | Recovery: 70-130%

**Low Sample Volumes:** Use as little as 15 µl of sample

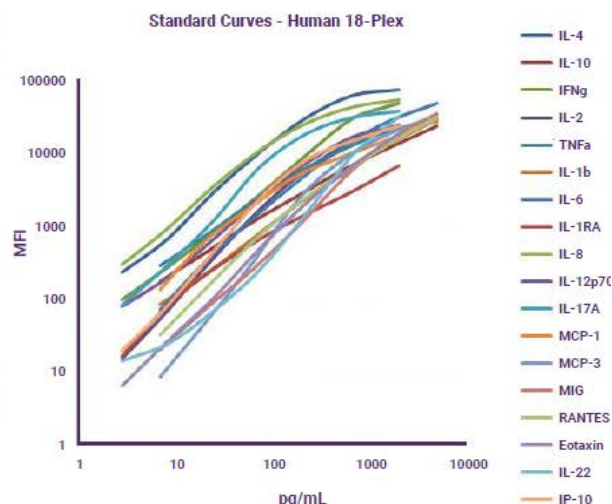
**Validated:** All assays fully tested for cross-reactivity in our lab

### Unbeatable Flexibility

**Comprehensive Choice of Targets:** Up to 400 assays & custom formats available for human, mouse, rat, porcine, canine and primates

**Wide Range of Sample Types:** Cell culture supernatants, saliva, plasma, cell/tissue lysates, serum, BALF, pleural and peritoneal fluids & more

**Multiple Formats:** 32-well and 96-well sizes available



## Cytokine Storm Testing for SARS-CoV-2/COVID-19 Research

Measure 46 key inflammation markers in a cost-effective and efficient manner from 5 validated multiplex panels covering inflammatory pathways including cytokines, chemokines, vascular proteins and acute-phase reactants.

CORE1 (CytokineMAP®A)	Core2 (CytokineMAP®B)	HMP8	HMP2	Core4
1. GM-CSF	1. BDNF	1. Adiponectin	1. Lp(a)	1. AAT
2. IFN-gamma	2. Eotaxin-1	2. A2Macro	2. B2M	2. C3
3. IL-2	3. Factor VII	3. EN-RAGE	3. CRP	3. Fibrinogen
4. IL-3	4. ICAM-1	4. Ferritin	4. SAP	4. Haptoglobin
5. IL-4	5. IL-1 alpha	5. Myoglobin	5. TBG	5. Ig A
6. IL-5	6. IL-1 beta	6. PAI-1	6. vWF	6. Ig M
7. IL-6	7. IL-1ra	7. PARC		7. VDBP
8. IL-7	8. IL-12p40	8. RANTES		
9. IL-8	9. IL-12p70	9. TIMP-1		
10. IL-10	10. IL-17	10. TNFR2		
11. IL-18	11. IL-23	11. VCAM-1		
12. MIP-1 alpha	12. MMP-3			
13. MIP-1 beta	13. MMP-9			
14. MCP-1	14. SCF			
15. TNF-alpha	15. VEGF			
16. TNF-beta				

Sample Volume Requirements - SERUM OR PLASMA: 50 µL | Intended for research use only.





# Inhibitors



## SARS-CoV-2 — The Battle against Coronavirus has just Begun

SARS-CoV-2	Compound	Information	Status
3CLpro	<a href="#">Saquinavir</a>	An HIV Protease inhibitor.	FDA approved
	<a href="#">Carfilzomib</a>	An irreversible proteasome inhibitor.	FDA approved
	<a href="#">Nelfinavir</a>	An orally bioavailable HIV-1 protease inhibitor ( $K_i=2$ nM) and antiviral agent.	FDA approved
S Protein & ACE2	<a href="#">Bimosiamose</a>	A nonoligosaccharide pan-selectin inhibitor and has anti-inflammatory effects.	Phase 2
RdRp	<a href="#">Zanamivir</a>	An influenza viral neuraminidase inhibitor.	FDA approved
nsp15	<a href="#">Ribavirin</a>	An antiviral agent against a broad spectrum of viruses including HCV, HIV, and RSV.	FDA approved
PLpro	<a href="#">Epetaborole hydrochloride</a>	A leucyl-tRNA synthetase (LeuRS) inhibitor. Intended for the infections caused by Gram-negative bacteria.	Phase 2



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NOW AVAILABLE FOR YOUR RESEARCH NEEDS

Name	Catalog Number	Activity	Species	Tag	Expression System	Sequence	Genbank Number
2019-nCoV PLpro, Active	C19PL-G241H	Activity Assay, Inhibition Profile	Virus	HIS	E.coli	1564-1882	QHD43415
2019-nCoV RdRp, Active	C19RP-G241H	Activity Assay	Virus	HIS	CHO cells	Full length	QHD43415
2019-nCoV Spike protein RBD	C19SD-G241H	ELISA, FACS	Virus	HIS	CHO cells	319-541	MN908947
2019-nCoV Spike protein RBD	C19SD-G241F	ELISA, FACS	Virus	Fc	CHO cells	319-541	MN908947
2019-nCoV Spike protein S1	C19S1-G241F	FACS	Virus	Fc	CHO cells	16-685	MN908947
2019-nCoV Spike protein S1	C19S1-G241H	FACS	Virus	HIS	CHO cells	16-685	MN908947
ACE2 (18-615) Protein	A51C2-G342F	ELISA	Human	Fc	CHO cells	18-615	AF291820
ACE2 (19-740) Protein	A51C2-G341F	Activity Assay, ELISA	Human	Fc	CHO cells	19-740	AF291820
Anti-2019-nCoV Spike (mFc)	C19S1-61MH	ELISA	Human		CHO cells		
Anti-2019nCoV Spike Protein	C19S1-61H	ELISA, FACS	Human, IgG1		CHO cells		
Anti-Human IgG, Unconjugated	H38-60M		Mouse, IgM				
Anti-Human IgM, Unconjugated	H38M-60M		Mouse, IgG				
Cas12 (LbCpf1) Protein	C12CR-G241H		Lachnospiraceae	HIS	E.coli	1-1227	ATB19154
Cas12(LbCpf1) Protein	C12CR-G241G		Lachnospiraceae	GST	E.coli	1-1227	ATB19154
CD147 (22-205) Protein	C81D7-G651F	ELISA	Human	Fc	CHO cells	22-205	NM_198589
METTL16, Active	M336-380G	Activity Assay	Human	GST	Sf9 insect cells using baculovirus	Full length	NM_024086
METTL3/METTL14, Active	M323-380G	Activity Assay	Human	GST	Sf9 insect cells using baculovirus	Full Length	NM_019852
Proteinase K, Active (MBG)	P535-30N		Paratyphlocyba		Yeast cells		





## Lectins Used For Coronavirus Research

Plant-derived lectins are known potent inhibitors of coronaviruses that act by preventing binding to cellular membranes. Further research endeavors are focusing on how lectins can block viral infection of human cells and their potential as therapeutic agents.

Lectins from various sources have been shown to exhibit potent antiviral properties by inhibiting infection of clinically important viral pathogens. The antiviral activity of lectins is largely attributed to direct binding to viral envelope glycans and preventing entry of the virus into cells.

Vector Laboratories is an established manufacturer of many plant lectins that are described in the literature as valuable tools in ongoing research to elucidate their potential in suppression of viral activity. Below is a list of mannose-specific and mannose/glucose-specific lectins, available in unconjugated and conjugated formats.

- [Galanthus nivalis](#)
- [Hippeastrum hybrid](#)
- [Narcissus pseudonarcissus](#)
- [Concanavalin A](#)
- [Lens culinaris](#)
- [Musa paradisiaca](#)
- [Pisum sativum](#)

Based on prior studies on coronaviruses such as SARS-CoV and MERS-CoV, mannose-specific plant lectins can be used to investigate antiviral properties of the novel coronavirus SARS-CoV-2, the virus that causes COVID-19.

## References:

1. Mitchell, C. et al. Antiviral Lectins: Selective Inhibitors of Viral Entry. Antiviral Res. 2017 Jun; 142: 37–54. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5414728/>)
2. Keyaerts, E. et al. Plant lectins are potent inhibitors of coronaviruses by interfering with two targets in the viral replication cycle. Antiviral Res. 2007 Sep;75(3):179-87. (<https://www.sciencedirect.com/science/article/pii/S0166354207002380?via%3Dihub>)
3. Ritchie, G., et al. Identification of N-linked carbohydrates from severe acute respiratory syndrome (SARS) spike glycoprotein. Virology. 2010 Apr 10;399(2):257-69. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3412594/>)
4. Fung, S. and Liu, DX. Post-translational modifications of coronavirus proteins: roles and function. Future Virol. (2018) 13(6), 405–430. (<https://www.futuremedicine.com/doi/full/10.2217/fvl-2018-0008>)

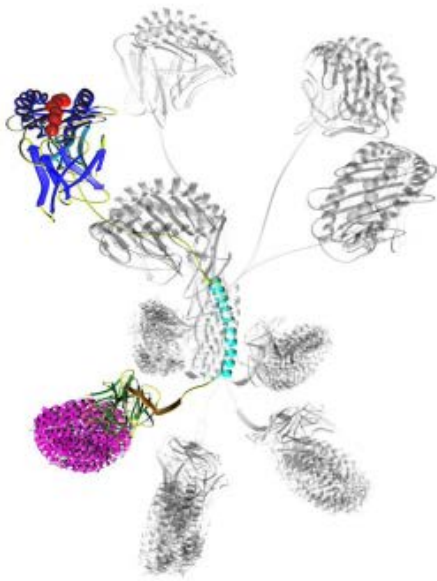
# Pentamers



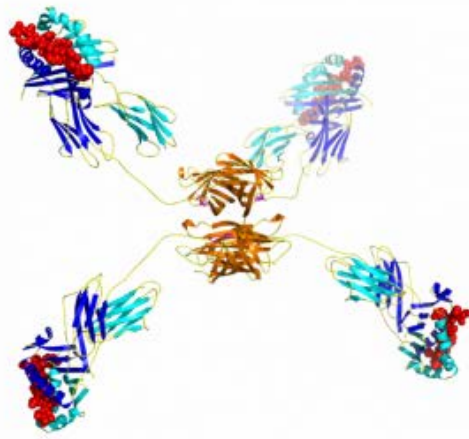
## Pro5® MHC Class I Pentamers

## ProT2® MHC Class II Tetramers

New products for understanding CD8+ and CD4+ T cell responses to **CoVID-19/SARS-CoV-2**



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ProT2® Tetramer

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**We can help you understand and manage immune responses!**

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# Isolation & Extraction



At this time, since saliva is considered an **equivalent sample type** for RT-PCR diagnosis of SARS-CoV-2, it is being rapidly validated in clinical labs as the alternate sample type - with the **benefit of self-collection, cheaper, and equally or more sensitive sample than a NPS swab.**

**Salimetrics provides Saliva Collection Aid (cat#5016.02), for collecting saliva into cryovials!**

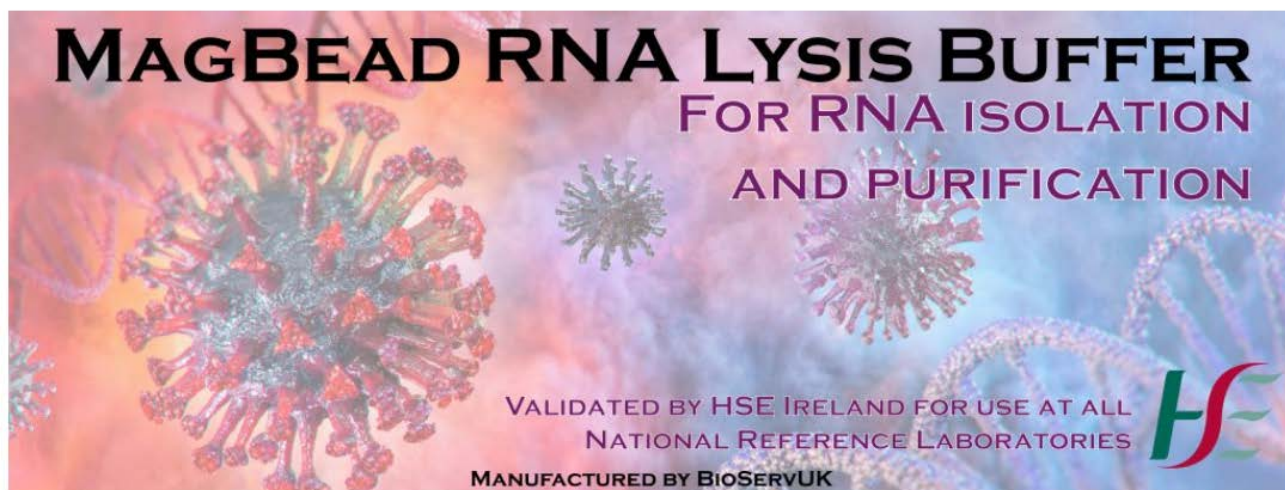
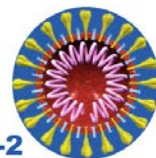


**CE-IVD**

- Simple and easy to use
- Increased participant compliance
- Individually packaged in a clean, foil pouch
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- Ready-to-go instructions
- Vented design helps avoid sample foaming
- Constructed of polypropylene to avoid sample retention or contamination
- Universal fit with common external thread cryovials
- Allows sample collection directly into cryovials in the field

# Isolation & Extraction

SARS-CoV-2



## ❖ BioServUK MagBead Viral RNA Lysis Buffer Cat# **BSV-COV-001/2**

is intended for the isolation and purification of total nucleic acids (DNA/RNA) from *biological* specimens for in vitro diagnostic procedures.

Designed for:

- Nasopharyngeal swab samples
- Lysis of DTT pre-treated sputum samples which had been spun down to pellets before adding the RNA Lysis buffer
- Stabilization of nucleic acids with lysates
- Nucleic acid purification using magnetic bead

**CE-IVD**

## ❖ SpinStar Viral Nucleic Acid Cat# **BSV-COV-005**



- **Efficient extraction of viral nucleic acids** from fresh or frozen human serum and plasma, respiratory specimens in VTM and stool
- **The kit is a validated one stop solution for extraction of both viral DNA and viral RNA**
- **The purified DNA and/or RNA is ready to use** for down stream analyse is like PCR, real-time PCR or any other molecular application that requires pure nucleic acids of high quality and integrity



# Isolation & Extraction



- Cat# S 400 20.1L Magnetic Preparation Kit to perform the most rapid, sensitive and reliable form of viral RNA extraction. Originally developed for veterinary diagnostics, the new viral extraction kit offers the possibility to **isolate highly purified viral RNA/DNA quickly, safely and in high volumes.**
- RoboPrep® 32



Features:

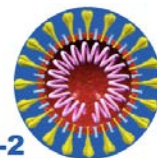
- ✓ Low / medium throughput automation
- ✓ Extract nucleic acids from up to 32 samples in less than one hour
- ✓ Flexible – Open platform, customizable protocols, easy-to-learn application
- ✓ Compact – Fits comfortably into every lab space

Product No.: D 220 32



# RT-qPCR

SARS-CoV-2



CE-IVD

Coronavirus (COVID-19) kits for RT-qPCR (quantitative reverse transcriptase PCR or real-time RT-PCR) enable quantitative data to be extracted from RNA samples. The one step, ready-to-use kits contain a variety of components, typically including reverse transcriptase, polymerase, buffers, fluorescent probes, primers, dNTPs, RNase inhibitors as well as both positive (PC) and negative controls (NC).

## RT-qPCR Detection Kits

BSV-qPCR-06	COVID-19 RT-qPCR Rapid Detection Kit	100 Reactions	RUO
BSV-qPCR-05	Coronavirus (SARS-CoV-2) PCR Detection Kit	100 Reactions	RUO
BSV-qPCR-07	COVID-19 PCR detection kit	100 reactions	IVD
BSV-qPCR-09	LyteStar 2019-nCoV PCR detection kit - Complete (E gene & RdRP gene)	2x 48 reactions	RUO
BSV-qPCR-10	LyteStar 2019-nCoV PCR detection kit S (E gene)	96 reactions	RUO
BSV-qPCR-08	Respiratory 19 Virus/Bacteria PCR detection kit	100 reactions	RUO
CLO-RT-25	RT-PCR quantitative COVID-19 assay CE-IVD	48 Reactions	IVD
PRD-Z-Path-COVID-19-CE	Coronavirus RT-PCR COVID-19 Test Kit	1 Kit	IVD



“Made in Germany”  
SARS-CoV-2  
Detection Kits

microproof®  
SARS-CoV-2 Screening /  
Identification Kits

CE-IVD

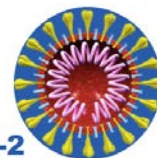
### microproof® SARS-CoV-2 Screening/Identification Kits

The microproof® SARS-CoV-2 Screening/Identification Kits\* are one-step reverse transcription real-time PCR assays intended for the in vitro qualitative detection of SARS-CoV-2 to support the diagnosis of COVID-19.

The microproof® SARS-CoV-2 Screening Kit detects the E gene (E) for *Betacoronavirus*, while the microproof® SARS-CoV-2 Identification Kit only targets the SARS-CoV-2 specific RNA-dependent RNA polymerase (RdRp) gene.

The E gene assay is recommended to screen for SARS-CoV-2, SARS-CoV and other SARS-related CoVs. The RdRp gene assay is used for the specific confirmation of SARS-CoV-2. For the E gene and RdRp, the fluorescence marker FAM is used, and ROX for the internal control. MS2 DNA or an MS2 phage are included in the kits as internal controls and as process controls.





AssayGenie

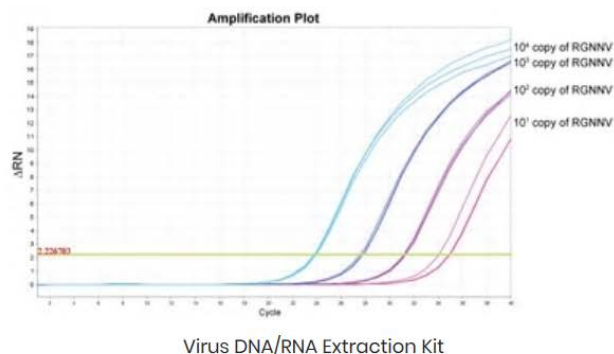


## SARS-CoV-2 qPCR & Viral RNA extraction Kits

Positive identification of SARS-CoV-2 infection in patients is carried out by nasopharyngeal swabbing and isolation of RNA for testing for SARS-CoV-2. At Assay Genie we provide both a Viral RNA extraction kit and qPCR reagents for SARS-CoV-2 identification.



COVID-19 (SARS-CoV-2) Triplex RT-qPCR Detection Kit



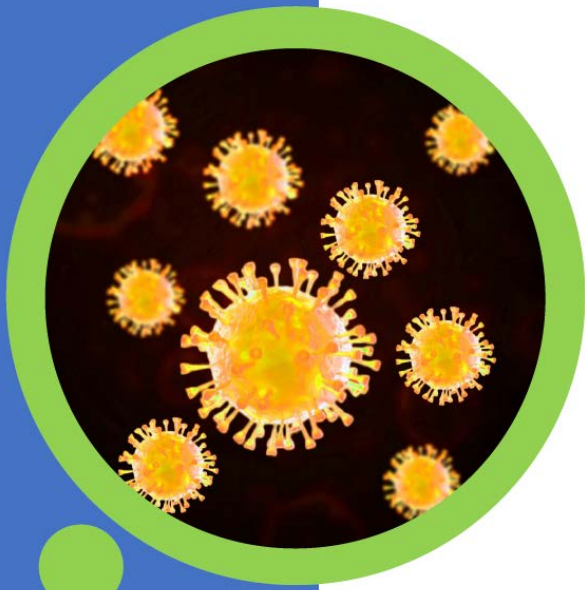
WANTAI

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## Wantai SARS-CoV-2 RT-PCR Kit

Nucleic Acid Detection Kit for Detection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (PCR-Fluorescence Probing)

Amplification and controls	RT-PCR master mix	1.25mL×1	dNTPs, rTth enzyme, UDG enzyme
	Mn(OAc) <sub>2</sub>	125μL×1	Mn(OAc) <sub>2</sub> solution
	Primer and probe	125μL×1	Primer and probe solution
	Positive control	1 mL×1	Artificial virus containing SARS-CoV-2 amplification target sequence
	Negative control	1 mL×1	Normal saline
Extraction	This kit does not contain RNA extraction reagents. Suggested extraction kits and equipment: Beijing Wantai, GenMagBio or QIAGEN and commercialized RNA extractor reagent kit with reliable quality.		



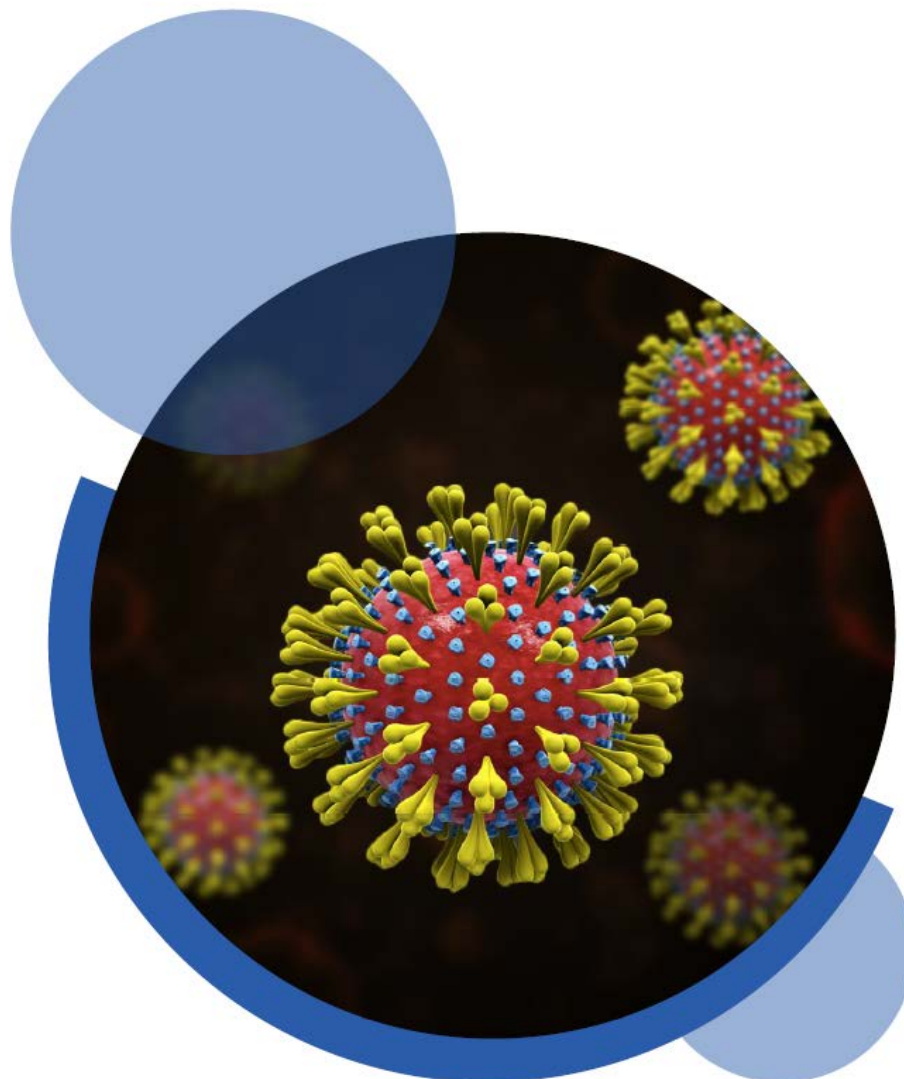
## Why Purchase **SARS-Coronavirus** **Products** from **DBA Italia?**

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