The Center for Genetic Engineering and Biotechnology of Sancti Spíritus, Cuba, specializes in the research, design, development, production and marketing of biological reagents: diagnostics, monoclonal, polyclonal and conjugated antibodies, recombinant proteins and enzymes, analytical systems for pharmacovigilance and pharmacokinetics studies of biotechnology products, and transfers enzymatic technologies for the sugar and food industries, and works on agricultural biotechnological research.

PRODUCTS CATALOG

CIGB CENTRO DE INGENIERÍA GENÉTICA Y BIOTECNOLOGÍA
SANCTI SPÍRITUS

Circunvalante Norte S/N, Olivos 3, CP 60100, Sancti Spíritus, Cuba. Apartado 83, Código Postal 60200

(53-041) 326273, (53-041) 328126

atencioncliente.cigbss@cigb.edu.cu

https://www.cigb.edu.cu/

PRODUCTS
CATALOG

CIGB CENTRO DE INGENIERÍA GENÉTICA Y BIOTECNOLOGÍA
SANCTI SPÍRITUS

CIGB CENTRO DE INGENIERÍA GENÉTICA Y BIOTECNOLOGÍA
SANCTI SPÍRITUS

Circunvalante Norte S/N, Olivos 3, CP 60100, Sancti Spíritus, Cuba. Apartado 83, Código Postal 60200

(53-041) 326273, (53-041) 328126

atencioncliente.cigbss@cigb.edu.cu

https://www.cigb.edu.cu/

OUR PRODUCTS

We research, develop and manufacture quality biomedical diagnostics and biological reagents. We have the Diagnostic Manufacturing License, valid until 2027, granted by the Center for State Control of Medicines, Equipment and Medical Devices (CECMED), and we are endorsed with the Certificate of Good Diagnostic Manufacturing Practices (Reg. D-20 17 CECMED) valid until 2024. We also have a Veterinary Health License granted by the National Center for Animal Health (CENASA), for the marketing of veterinary diagnosticians.

"WE LOOK for answers
We offer SOLUTIONS"

MAIN ANTIBODIES LINES

PRODUCT	TARGET	ASSOCIATED PRODUCTS
Antibodies	SARS CoV-2 virus proteins	CBSSNCoV.1; CBSSNCoV.3; CBSSNCoV.10; CBSSNCoV.1, .3 y .10-HRP CBSSRBD-S.1; CBSSRBD-S.4 ; CBSSRBD-S.5; CBSSRBD-S.6; CBSSRBD-S.7; CBSSRBD-S.8 CBSSRBD-Sp.1; CBSS antiNcov en carnero; CBSS antiNCov en carnero-HRP CBSSRBD-S.1, S.7 y S.8-HRP
	Hepatitis B virus proteins	CBHepBNatural; CBHepB.1; CBHepBCore; CBHepB.4; CBSS anti IFA HepBcore; CBSS anti IFAHepBcore-HRP
	Hepatitis C virus proteins	CBSSHCV.1; CBSSHCV.2; CBSSHCV.3
	Human erythropoietin	CBSSEPO.1; CBSSEPO.3; CBSSEPO.3-HRP
	Prostate specific antigen	CBPSA.2; CBPSA.4; CBPSA.8; CBPSA.9
	Human immunoglobulins	CBIgGH; CBIgMH; CBIgE.2; CBSSIgAH.2; CBSSIgGH-HRP
	Epidermal growth factor	CBEGF.1; CBEGF.2; CBSS anti EGF en conejo; CBSSEGF.2-HRP; CBSSEGF.1-HRP

MONOCLONAL ANTIBODIES

NO.	REFERENCE CODE	NAME	SPECIFICITY	SUBCLASS
1	3.005	CBSSBm.1	Bm-86 (Intestinal protein from the tick *Boophilus microplus*)	IgG1
2	3.006	CBSSBm.2	Bm-86 (Intestinal protein from the tick *Boophilus microplus*)	IgG1
3	3.007	CBSSNtp64k	N terminal portion of protein p64K of *N. meningitidis*	IgG1
4	3.008	CBSSEPO.1	Human erythropoietin	IgG2a
5	3.009	CBSSHCV.1	Hepatitis C virus	IgG2a
6	3.010	CBp64k	P64K protein of *N. meningitidis* (specific for epitope other than 3.007)	IgG2a
7	3.011	CBSSTiGH.1	Tilapia growth factor	IgG2b
8	3.012	CBSSTiGH.2	Tilapia growth factor	IgG2b
9	3.013	CBSShCG.3	Human chorionic gonadotropin	IgG1
10	3.014	CBSShCG.4	Human chorionic gonadotropin	IgG1
11	3.015	CBSSHCV.2	Hepatitis C virus	IgG1
12	3.016	CBSSHCV.3	Hepatitis C virus	IgG1
13	3.002	CBPSA.2	Prostate specific antigen	IgG1
14	3.003	CBPSA.4	Prostate specific antigen	IgG1
15	3.017	IPK4b6	Dengue virus	IgG1
16	3.018	CBIgGH	Fd region of human IgG	IgG2a
17	3.019	CBSSEPO.3	Human erythropoietin	IgG1
18	3.004	CBPSA.9	Prostate specific antigen	IgG1
19	3.020	CBPSA.8	Prostate specific antigen	IgG1
20	3.021	CB9E10	Mic-tag	IgG2b
21	3.023	CBRV.2	Rotavirus VP6	IgG1
22	3.024	CBFLA.1	Dengue virus	IgG2a

MONOCLONAL ANTIBODIES

NO.	REFERENCE CODE	NAME	SPECIFICITY	SUBCLASS
23	3.025	CBIgMH	Human IgM	Un
24	3.001	CBHepBNatural	Hepatitis B virus surface antigen	IgG1
25	3.028	CBHepB.1	Recombinant surface antigen of hepatitis B virus	IgG2b
26	3.029	CBIFNα2.4	Recombinant human alpha interferon	IgG2a
27	3.030	CBEGF.1	EGF (Recombinant human and murine)	IgG1
28	3.031	CBEGF.2	EGF (Recombinant human and murine)	IgG1
29	3.032	IPKH36	Dengue virus	IgG1
30	3.033	CBSSBm.3	Bm-86 (intestinal protein from the tick *Boophilus microplus*)	IgG1
31	3.034	CBIFNα2.3	Recombinant human alpha interferon	IgG1
32	3.035	CBIgE.2	Human IgE	ND
33	3.036	CBSK.1	Recombinant streptokinase	IgG1
34	3.037	CBSK.2	Recombinant streptokinase	IgG1
35	3.038	CBIL2.2	Recombinant human interleukin	IgG1
36	3.039	CBIL2.1	Recombinant human interleukin	IgG2a
37	3.040	CBDV.2	Dengue virus	IgG2a
38	3.041	CBHepBCore	Hepatitis B virus core antigen	IgG2a
39	3.042	CBSSTiGH.3	Tilapia growth factor	IgG2b
40	3.043	CBSSGCSF.1	Recombinant human granulocytes growth stimulating factor	IgG1
41	3.044	CBSSGCSF.2	Recombinant human granulocytes growth stimulating factor	IgG1
42	3.045	CBSSGCSF.3	Recombinant human granulocyte growth stimulating factor	IgG2b

- Un: Undetermined

MONOCLONAL ANTIBODIES

NO.	REFERENCE CODE	NAME	SPECIFICITY	SUBCLASS
43	3.046	CBHepB.4*	Hepatitis B virus surface antigen	Un
44	3.047	CENSA1G6	Classical swine fever virus	Un
45	3.048	CBBSA.1	Glycosylated bovine albumin	IgG1
46	3.049	CBBSA.2	Glycosylated bovine albumin	IgG1
47	3.050	CBSSHA.1	Avian influenza virus hemagglutinin	IgG3
48	3.051	CBSSHA.2	Avian influenza virus hemagglutinin	IgG3
49	3.052	CBSSHA.3	Avian influenza virus hemagglutinin	IgG1
50	3.054	CBSSIFNγ.1	Recombinant human gamma interferon	IgG1
51	3.055	CBSSIFNγ.2	Recombinant human gamma interferon	IgG1
52	3.056	CBSSE2.1	Classical swine fever virus E2	IgG3
53	3.057	CBSSE2.2	Classical swine fever virus E2	IgG2b
54	3.058	CBSSE2.3	Classical swine fever virus E2	IgG1
55	3.059	CBSSIFNγ.3	Recombinant human gamma interferon	IgG1
56	3.060	CBSSPHYC.1	Phycocyanin C	IgG2a
57	3.061	CBSSHSA.1	Human serum albumin	IgG1
58	3.062	CBSSHbS.2	Human hemoglobin S	Un
59	3.063	CBSSHbA.1	Human hemoglobin S	Un
60	3.064	CBantiCD4	CD4 (in rat)	Un
61	3.065	CBantiCD8	CD4 (in rat)	Un
62	3.066	CBSSMY32.1	Fish my32 protein	IgG1
63	3.067	CBSSMY32.2	Fish my32 protein	IgG1
64	3.070	CBSSNCoV.1	M20P19 (SARS-CoV-2 CBSSNCoV.1 N protein peptide	IgG1

• Un: Undetermined

MONOCLONAL ANTIBODIES

NO.	REFERENCE CODE	NAME	SPECIFICITY	SUBCLASS
65	3.072	CBSSNCoV.3	SARS-CoV-2 recombinant N protein	Un
66	3.079	CBSSNCoV.10	SARS-CoV-2 recombinant N protein	IgG1
67	3.083	CBSSRBD-S.1	Recombinant RBD protein (SARS-CoV-2 S)	IgG2b
68	3.086	CBSSRBD-S.4	Recombinant RBD protein (SARS-CoV-2 S)	IgG2a
69	3.087	CBSSRBD-S.5	Recombinant RBD protein (SARS-CoV-2 S)	IgG1
70	3.088	CBSSRBD-S.6	Recombinant RBD protein (SARS-CoV-2 S)	IgG1
71	3.089	CBSSRBD-S.7	Recombinant RBD protein (SARS-CoV-2 S)	IgG1
72	3.090	CBSSRBD-S.8	Recombinant RBD protein (SARS-CoV-2 S)	IgG1
73	3.093	CBFagoM13K07	Fago M13 K07	IgG1
74	3.094	CBSSRBD-Sp.1	Recombinant RBD of the SARS-CoV-2 virus obtained in *Pichia pastoris*	IgG2B
75	3.096	CBSSIgAH.1	Human IgA	IgG1
76	3.097	CBSSIgAH.2	Human IgA	IgG1
77	3.098	CBSSHis.1	Polyhistidine tail (6) in the carboxy-terminal region of recombinant proteins	IgG1

• Un: Undetermined

"Always for life"

POLYCLONAL ANTIBODIES

NO.	REFERENCE CODE	NAME	SPECIFICITY	SOURCE
1	4.002	CBSS anti p64K in rabbit	API CIGB of p64K recombinant of *N. meningitidis*	Rabbit
2	4.003	CBSS anti EGF in rabbit	Recombinant EGF	Rabbit
3	4.004	CBSS anti IgGrabbit in ram	IgG rabbit	Ram
4	4.005	CBSS anti IgGrabbit in ram	IgG ram	Rabbit
5	4.007	CBSS anti HSA in rabbit	Human serum albumin	Rabbit
6	4.008	CBSS anti IgGmouse in rabbit	IgG mouse	Rabbit
7	4.001	CBSS anti IgGmouse in ram	IgG mouse	Ram
8	4.012	CBSS anti Hib in rabbit	*Haemophilus influenzae* proteins	Rabbit
9	4.014	CBSS anti API HepBcore	HepBcore API	Rabbit
10	4.015	CBSS anti API IFNα2bHr	IFNα2bHr API	Rabbit
11	4.017	CBSS antiNcov in ram	Recombinant N protein of the SARS-CoV-2 virus	Ram
12	4.019	CBSS anti *E. coli* recombinant streptokinase in rabbit	*E. coli* contaminating proteins (human recombinant streptokinase host strain)	Rabbit
13	4.016	CBSS anti *E. coli* recombinant streptokinase in rabbit	*E. coli* contaminating proteins	Rabbit

ANTIBODIES CONJUGATED TO PEROXIDASE

NO.	REFERENCE CODE	NAME	SPECIES
1	5.001	CBSSBm.2-HRP	Murine
2	5.002	CBSSNtp64k-HRP	Murine
3	5.003	CBSSp64k-HRP	Murine
4	5.005	CBSS anti IgGcrabbit in ram-HRP	Ram
5	5.006	CBSS anti IgGram in rabbit-HRP	Rabbit
6	5.007	CBSSTiGH.2-HRP	Murine
7	5.008	CBSSEPO.3-HRP	Murine
8	5.009	CBSSSK.1-HRP	Murine
9	5.010	CBSSBm.1-HRP	Murine
10	5.011	CBSSTiGH.1-HRP	Murine
11	5.012	CBSSTiGH.3-HRP	Murine
12	5.013	CBSSIFAHepB-HRP	-
13	5.014	CBSSEGF.2-HRP	Murine
14	5.015	CBSSIFNα2.4-HRP	Murine
15	5.016	CBSSProtein A-HRP	-
16	5.017	CBSSHepB.4-HRP	Murine
17	5.018	CBSSHepB.1-HRP	Murine
18	5.019	CBSSIFAHepB-HRP	-
19	5.020	CBSSEGF.2-HRP	Murine
20	5.021	CBSSIFNα2.4-HRP	Murine
21	5.023	CBSSProtein A-HRP	-
22	5.024	CBSSHepB.4-HRP	Murine

ANTIBODIES CONJUGATED TO PEROXIDASE

NO.	REFERENCE CODE	NAME	SPECIES
23	5.025	CBSSHepB.1-HRP	Murine
24	5.026	CBSSBm.3-HRP	Murine
25	5.027	CBSSHSA.1-HRP	Murine
26	5.028	CBSSIFNγ.1-HRP	Murine
27	5.031	CBSSHA.1-HRP	Murine
28	5.032	CBSSHA.2-HRP	Murine
29	5.033	CBSSE2.1-HRP	Murine
30	5.035	CBSSHA.3-HRP	Murine
31	5.036	CBSSE2.2-HRP	Murine
33	5.038	CBSS anti E. coli of SK-HRP	Rabbit
34	5.039	CBSSE2.3-HRP	Murine
35	5.040	CBSS anti Hib in rabbit-HRP	Rabbit
36	5.041	CBSSMY32.1-HRP	Murine
37	5.042	CCBSSMY32.2-HRP	Murine
38	5.043	CBSS anti APIHepBcore-HRP	Rabbit
39	5.044	CBSSRBD-S.1-HRP	Murine
40	5.046	CBSSRBD-S.7-HRP	Murine
41	5.047	CBSSRBD-S.8-HRP	Murine
42	5.048	CBSSNCov.1-HRP	Murine
43	5.049	CBSSNCov.3-HRP	Murine
44	5.050	CBSSNCov.10-HRP	Murine
45	5.051	CBSS antiNCov in ram-HRP	Ram
46	5.052	CBFagoM13K07-HRP	Murine

ALWAYS
FOR LIFE

RECOMBINANT PROTEINS

NO.	REFERENCE CODE	NAME	DESCRIPTION
1	6.001.00	NS3 c33c recombinant protein	Use in vitro assays for the detection of antibodies against the non-structural protein NS3 of the hepatitis C virus
2	6.002.00	P24 recombinant protein	Use in vitro assays for the detection of antibodies against the p24 protein of HIV-1
3	6.003.00	Gp120 recombinant protein	Use in vitro assays for the detection of antibodies against the HIV-1 protein gp120
4	6.004.00	Gp36 recombinant protein	Use in vitro assays for the detection of antibodies against the HIV-2 protein gp36
5	6.005.00	Gp41 recombinant protein	Use in vitro assays for the detection of antibodies against the HIV-1 gp41 protein

The Center for Genetic Engineering and Biotechnology of Sancti Spíritus is the only supplier of these reagents, essential in the manufacture of SUMA technology diagnostics for the diagnosis of HIV and hepatitis C (marketed by TECNOSUMA. S.A. and produced by the Immunoassay Center, Havana, Cuba), used in the national surveillance and diagnosis network of these diseases.

WE WORK
FOR ONE HEALTH

WE WORK FOR ONE HEALTH

ENZIMES

HeberZima Taq ADN Polimerase

Reference code: 2.001.00
Source: *E. coli* strain carrying the gene cloned from Thermus aquaticus
Characteristics: The Taq DNA Polymerase I enzyme catalyzes the polymerization of nucleotides within the double DNA molecule in the 5' – 3' direction in the presence of magnesium. Its use is guaranteed for PCR (polymerase chain reaction) techniques and oligonucleotide extension reactions at high temperatures.
Use of the enzyme is recommended with 10X Taq Pol buffer supplemented with 2.5 mM $MgCl_2$.
Storage: -20 °C
Unit definition: One unit is defined as the amount of enzyme required to catalyze the incorporation of 10 nmol dNTP in acid-insoluble form for 30 minutes at 70 °C in 1X reaction buffer, 200 µM of each dNTP including labeled dATP and 12.5 µg of activated salmon sperm DNA.
Presentation: 100 units.

HeberZima Pwo ADN Polimerase

Reference code: 2.002.00
Source: *E. coli* strain carrying the cloned gene from Pyrococcus woesei
Characteristics: Pwo DNA Polymerase catalyzes the polymerization of nucleotides within the double DNA molecule in the 5' – 3' direction in the presence of magnesium. This enzyme has 3'-5' exonuclease proofreading activity and is recommended for PCR (polymerase chain reaction) techniques and oligonucleotide extension reactions that require high fidelity.
It is recommended for use with Pwo Pol 10X reaction buffer, but is compatible with Pfu DNA polymerase reaction buffer 10X with $MgSO_4$ supplied by Promega (Catalog number M776A).
Storage: -20 °C
Presentation: 100 units.

HEMERUBIN

No.: 1
Reference code: 7.000
Name: Ram's blood
Source: Ram
Presentation: Bag with 500 mL

WE LOOK FOR ANSWERS

DIAGNOSTICS FOR HUMAN USE

HeberFast Line®
Embarazo II

Description: Rapid, one-step test for early diagnosis of pregnancy in urine. Detects intact human chorionic gonadotropin (hCG).
Format: Immunochromatographic strip. Lateral flow technology.
Presentations: Cases for 50 (Ref.: 1.005.00) and 200 tests (Ref.: 1.005.01). Professional use.
Storage: 2 - 30 °C
Test time: 5 to 10 minutes
Operating principle: Rapid, lateral flow, qualitative assay that consistently detects up to 50 mIU/mL of the international hCG standard in urine samples.

HeberFast Line®
Maternitest II

Description: Rapid, one-step test for early diagnosis of pregnancy in urine. Detects intact human chorionic gonadotropin (hCG).
Format: Immunochromatographic strip. Lateral flow technology.
Presentations: Cases for a test (Ref.: 1.006.00). For self-test.
Storage: 2 to 30 °C
Test time: 5 to 10 minutes
Operating principle: Rapid, lateral flow, qualitative assay that consistently detects up to 50 mIU/mL of the international hCG standard in urine samples.

DIAGNOSTICS FOR HUMAN USE

HeberFast Line®
Rotavirus II

Description: Rapid, one-step test for the detection of rotavirus in feces.
Format: Immunochromatographic strip. Lateral flow technology.
Presentation: 24 (Ref.: 1.009.00) tests per case. Professional use.
Storage: 2 to 8 °C
Test time: 5 to 10 minutes
Operating principle: Rapid qualitative assay using two different murines monoclonal antibodies against rotavirus particles and colloidal gold as a marker.

HeberFast Line®
anti-transglutaminasa

Description: Rapid, one-step test for the detection of antibodies against transglutaminase in blood, serum or plasma samples.
Format: Immunochromatographic strip. Lateral flow technology.
Presentation: 20 (Ref.: 1.004.000) and 25 (Ref.: 1.004.02) tests for case. Professional use.
Storage: 2 to 8 °C
Test time: 15 to 20 minutes
Operating principles: Rapid qualitative assay for the detection of IgG and IgA antibodies. It uses guinea pig transglutaminase protein fixed to a solid support and also labeled with colloidal gold.

CIGB CENTRO DE INGENIERÍA GENÉTICA Y BIOTECNOLOGÍA

WE OFFER SOLUTIONS

DIAGNOSTICS FOR VETERINARY USE

HeberFast Line®
Gavac

Description: Rapid, one-step test for the detection of protective levels of antibodies against the *Boophilus microplus* tick in bovine serum.
Format: Immunochromatographic strip. Lateral flow technology.
Presentation: 100 test for case (Ref.: 1.007.00). Professional use.
Storage: 2 to 30 °C
Test time: 5 to 10 minutes
Operating principle: Rapid qualitative assay for the detection of antibodies against the Bm86 protein; uses this recombinant protein fixed to a solid support and labeled with colloidal gold.

HeberFast Line®
anti-E2 de PPC

Description: Rapid, one-step test for detection of antibodies against the E2 protein of the plague virus classical swine in swine serum samples.
Format: Immunochromatographic strip. Lateral flow technology.
Presentation: 150 tests per kit (Ref.: 1.008.00). Professional use.
Storage: 2 to 30 °C
Test time: 15 to 20 minutes
Operating principle: Rapid qualitative assay for the detection of antibodies against the E2 protein; uses this recombinant protein fixed to a solid support and also labeled with colloidal gold.

PRODUCTS DEVELOPING

New hybridomas generated

Monoclonal antibodies

CBSSp24.1	Recombinant HIV-1 p24 protein
CBSSp24.3	
CBSSGHRL-M.1	Manjuari ghrelin peptide 104
CBSSGHRL-T.1	Tilapia ghrelin peptide 98
CBSSGST.1	GST fusion protein
CBSSGST.3	
CBSSGST.7	
CBSSGST.9	
CBSSCoreHCV.1	Hepatitis C virus core protein
CBSSCoreHCV.2	
CBSSCoreHCV.3	
CBSSCoreHCV.4	

Polyclonal antibodies

NAME
CBSS IgGrat

SPECIFICITY
IgG rat

SOURCE
Rabbit

ORIGIN PLACE
CIGB SS

PERFORMANC mg AcP/mL sera
10

CODE
P 61

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.1

Unit: 10 mg
Storage: -20 °C. Avoid repeated freeze/thaw cycles. Expires in 10 years.
Clonality: Monoclonal
Preservant: timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: affinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L in pH 7.0
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD of the SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Affinity constant: $3.34 \pm 2.76 \times 10^7$ L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION
Recommended uses: Sandwich ELISA (figure and table)

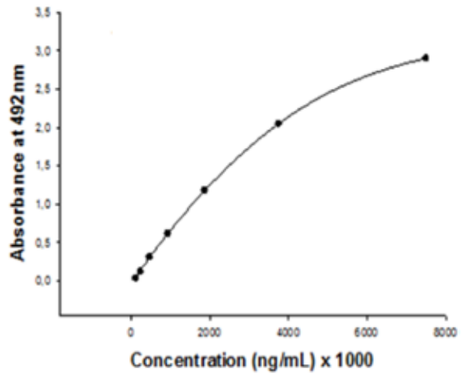

Figure. Sandwich ELISA. Five-parameter logistic fit for the standard curve. Coating the plate with the CBSSRBD-S.8 mAb and applying the CBSSRBD-S.1-HRP mAb as a conjugate. The RBD expressed in *Pichia pastoris* was used as a standard. The attached table shows the coefficient of variation (CV) and the mean error as measures of the precision and accuracy of the recalculated concentration at each point. Quantification limit: 0.23 ng/mL.

Table 1. Additivity index (%) versus other similar monoclonal antibodies (95% cut-off: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

AcM	CBSSRBD-S.1
CBSSRBD-S.2	88.27
CBSSRBD-S.3	40.43
CBSSRBD-S.8	73.61
CBSSRBD-S.11	80.79

Note: Additivity indices higher than the cut-off point indicate that the antibodies recognize different epitopes.

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.4

Unit: 10 mg
Storage: - 20 °C. A void repeated freeze/thaw cycles. Expires in 10 years. Clonality: Monoclonal
Preservant: Timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: affinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L in pH 7.0
Purity (SDS-PAGE): ≥ 85 %
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD of the SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Affinity constant: 1.15 ± 0.39 × 10^8 L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION
Recommended uses: Sandwich ELISA (figure and table)

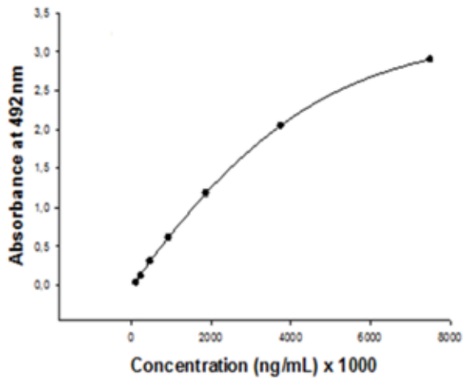

Figure. Sandwich ELISA. Five-parameter logistic fit for the standard curve. Coating the plate with the CBSSRBD-S.8 MAb and applying the CBSSRBD-S.1-HRP MAb as a conjugate. The RBD expressed in *Pichia pastoris* was used as a standard. The attached table shows the coefficient of variation (CV) and the mean error as measures of the precision and accuracy of the recalculated concentration at each point. Quantification limit: 0.23 ng/mL.

Table. Additivity index (%) against other similar monoclonal antibodies (95% cut-off point: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

AcM	CBSSRBD-S.4
CBSSRBD-S.2	56.18
CBSSRBD-S.3	61.04
CBSSRBD-S.8	67.66
CBSSRBD-S.11	67.25

Note: Additivity indices higher than the cut-off point indicate that the antibodies recognize different epitopes.

WE LOOK FOR ANSWERS

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.5

Unit: 10 mg
Storage: -20 °C. Avoid repeated freeze/thaw cycles. Expires in 10 years.
Clonality: Monoclonal
Preservant: Timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: affinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L a pH 7.0
Purity (SDS-PAGE): ≥ 85 %
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD ofthe SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Neutralization (IC_{50}): 2216.7 pM
Affinity constant: 1.04 ± 0.60 × 10^8 L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION
Recommended use: ELISA

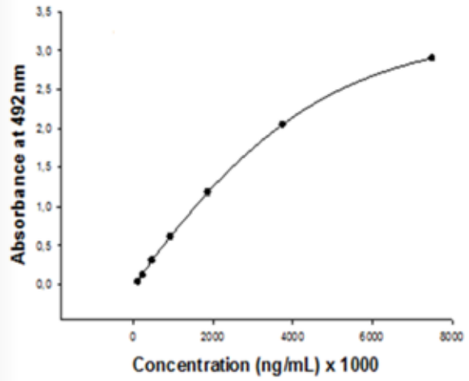

Figure. Sandwich ELISA. Five-parameter logistic fit to the standard curve. Plate was coated with CBSS-RBD-S.8 mAb and CBSSRBD-S.1-HRP mAb was applied as a conjugate. RBD expressed in *Pichia pastoris* was used as a standard. The attached table shows the coefficient of variation (CV) and the mean error as measures of the precision and accuracy of the recalculated concentration at each point. Quantification limit: 0.23 ng/m.

Table. Additivity index (%) versus other similar monoclonal antibodies (95 % cut-off point: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.6

Unit: 10 mg
Storage: -20 °C. Avoid repeated freeze/thaw cycles. Expires in 10 years
Clonality: Monoclonal
Preservant: Timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: a ffinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L a pH 7.0
Purity (SDS-PAGE): ≥ 85 %
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD ofthe SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Neutralization (IC_{50}): 2216.7 pM
Affinity constant: 1.04 ± 0.60 × 10^8 L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION: Sandwich ELISA (table)
Recommended use: Alternative viral neutralization assay (figure)

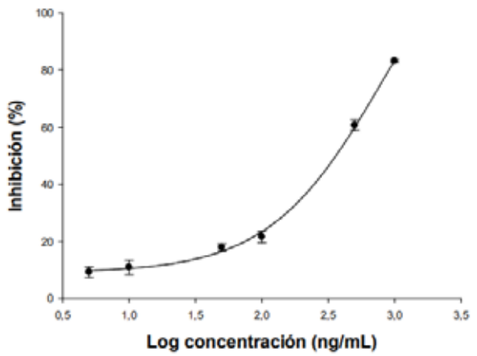

Figure. Blockade of RBD-HRP binding to the ACE-2 receptor mediated by the mAb CBSSRBD-S.6. Inhibition (%) = (1- A450Inh/A450Max) × 100, where A450Inh means the inhibition of the mAb to RBD-HRP binding to ACE-2 and A450Max is the A450nm of the conjugate without preincubation with the antibody. Data are the mean of duplicate measurements ± SD.

Table. Additivity index (%) versus other similar monoclonal antibodies (95 % cut-off point: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

AcM	CBSSRBD-S.6
CBSSRBD-S.2	56.32
CBSSRBD-S.7	56.16
CBSSRBD-S.11	80.07

Note: Additivity indices higher than the cut-off point indicate that the antibodies recognize different epitopes.

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.7

Unit: 10 mg
Storage: -20 °C. Avoid repeated freeze/thaw cycles. Expires in 10 years
Clonality: Monoclonal
Preservant: Timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: a ffinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L a pH 7.0
Purity (SDS-PAGE): ≥ 85 %
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD ofthe SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Neutralization (IC_{50}): 2216.7 pM
Affinity constant: 1.04 ± 0.60 × 10^8 L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION
Recommended use: Sandwich ELISA (figure y table)

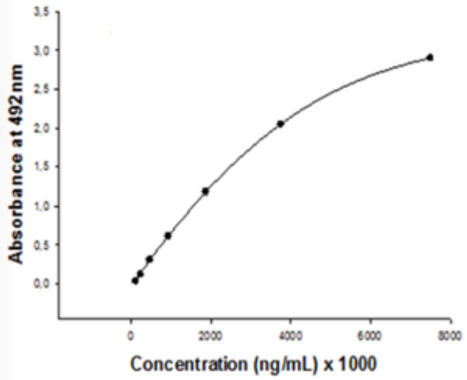

Figure. Sandwich ELISA. Five-parameter logistic fit to the standard curve. Plate was coated with CBSSRBD-S.8 mAb and CBSSRBD-S.7-HRP mAb was applied as a conjugate. RBD expressed in *Pichia pastoris* was used as a standard. The adjacent table shows the coefficient of variation (CV) and mean error as measures of the precision and accuracy of the recalculated concentration at each point. Limit of quantification: 0.12 ng/mL.

Table. Additivity index (%) versus other similar monoclonal antibodies (95% cut-off point: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

AcM	CBSSRBD-S.7
CBSSRBD-S.1	75.06
CBSSRBD-S.8	78.90
CBSSRBD-S.11	57.72

Note: Additivity indices higher than the cut-off point indicate that the antibodies recognize different epitopes.

WE LOOK FOR ANSWERS

MONOCLONAL ANTIBODIES AGAINST THE SARS-COV-2 VIRUS

CBSSRBD-S.8

Unit: 10 mg
Storage: -20 °C. Avoid repeated freeze/thaw cycles. Expires in 10 years
Clonality: Monoclonal
Preservant: Timerosal 0.02 % or sodium azide 0.02 %
Isotype: IgG_1
Purification method: a ffinity for protein A sepharose
Buffer solution: Tris 20 mmol/L - NaCl 150 mmol/L a pH 7.0
Purity (SDS-PAGE): ≥ 85 %
Activity (Indirect ELISA): ≤ 50 ng/mL
Protein concentration (Lowry and DO at 280 nm): ≥ 1 mg/mL

PRODUCT DESCRIPTION
Source: Balb/c mouse hybridoma and P3/x63.Ag8.653 myeloma
Species: Murine
Specificity: Fragments of the RBD of the SARS-CoV-2 S1 protein, expressed in HEK-293 y *P. pastoris*
Neutralization (IC50): 122.7 pM
Affinity constant: 1.57 ± 0.60 × 10^8 L/mol
Immunogen: SARS-CoV-2 RBD-His, recombinant antigen in HEK-293

PRODUCT APPLICATION: Sandwich ELISA (Figure 1 and Table)
Recommended use: Alternative viral neutralization assay (Figure 2)

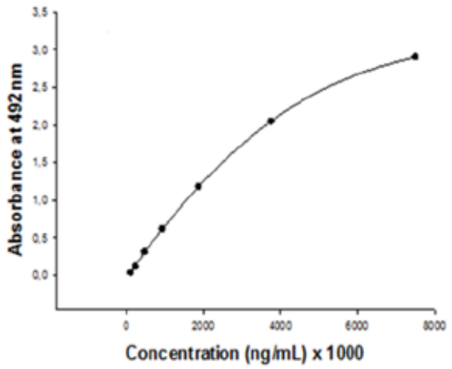

Figure 1. Sandwich ELISA. Five-parameter logistic fit to the standard curve. Plate was coated with CBSSRBD-S.8 mAb and CBSS-RBD-S.7-HRP mAb was applied as conjugate. RBD expressed in *P. pastoris* was used as standard. The adjacent table shows the coefficient of variation (CV) and mean error as measures of the precision and accuracy of the recalculated concentration at each point. Limit of quantification: 0.12 ng/mL.

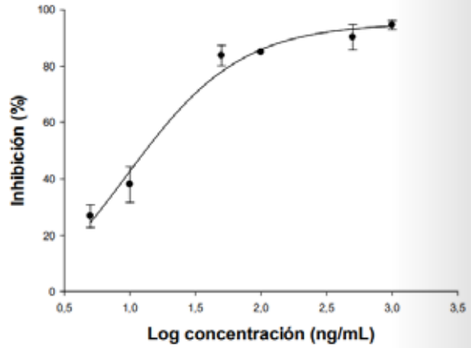

Figure 2. Blockade of RBD-HRP binding to the ACE-2 receptor mediated by the mAb CBSSRBD-S.8. Inhibition (%) = (1- A450Inh / A450Max) × 100, where A450Inh means the inhibition of the mAb to RBD-HRP binding to ACE-2 and A450Max is the A450nm of the conjugate without preincubation with the antibody. Data are the mean of duplicate measurements ± SD.

Table. Additivity index (%) versus other similar monoclonal antibodies (95% cut-off point: 39.18)

Nominal Concentration (ng/mL)	Calculated Concentration (ng/mL)	Interassay Precision CV(%)	Accuracy Error (%)
7.50	7.50	0.80	0.00
3.75	3.75	1.13	-0.03
1.88	1.88	0.98	0.05
0.938	0.932	2.05	-0.59
0.469	0.479	2.91	2.19
0.234	0.223	4.51	-4.85
0.117	0.121	9.91	3.25

AcM	CBSSRBD-S.8		
CBSSRBD-S.1	73.61	**CBSSRBD-S.6**	56.16
CBSSRBD-S.2	100.53	**CBSSRBD-S.7**	78.90
CBSSRBD-S.4	67.66	**CBSSRBD-S.11**	95.67

Note: Additivity indices higher than the cut-off point indicate that the antibodies recognize different epitopes.