

# GTX300122

# SARS-CoV-2 (COVID-19) RBD ACE2 Binding Activity / Neutralization Assay Panel

#### **Product Content**

Cat No	Product Name	Reactivity	Application	Package
GTX13568 pro	33- Human ACE2 (ECD) protein, mouse IgG Fc tag (active)		Binding Assay, ELISA, Functional Assay, Lateral Flow	25 μg
GTX13601 pro	4-SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 / Alpha varial His tag (active)	nt,	Binding Assay, WB, ELISA, Sandwich ELISA	25 μg
GTX13602 pro	22-SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.351 / Beta varian His tag (active)	it,	Binding Assay, WB, ELISA, Sandwich ELISA	25 μg
GTX13604 pro	3-SARS-CoV-2 (COVID-19) Spike RBD Protein, P.1 / Gamma variant His tag (active)	- -	Binding Assay, WB, ELISA	25 μg
GTX13605 pro	8-SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 with E484K, F tag (active)	His	Binding Assay, WB	25 μg
GTX13609 pro	00- SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active)		Binding Assay, WB, ELISA, Sandwich ELISA	25 μg
GTX63579	11 SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002]	SARS Coronavirus 2	ELISA, Lateral Flow, Neutralizing/Inhibition, Sandwich ELISA	100 μΙ

#### Note

For In vitro laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.



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# Human ACE2 (ECD) protein, mouse IgG Fc tag (active)

# Cat. No. GTX135683-pro

Application	Binding Assay, ELISA, Functional Assay, Lateral Flow
Species	Human



## APPLICATION

**Calculated MW** 92 kDa. ( Note )

PROPERTIES		
Form	Liquid	
Buffer	PBS	
Preservative	No preservative	
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.	
Concentration	0.8 mg/ml (Please refer to the vial label for the specific concentration.)	
Region/Sequence	Human ACE2 of NP_068576.1 (Met1-Ser740) with the Fc region of mouse IgG1 at the C-terminus	
Expression System	HEK293 cells	
Purity	>90%	
Conjugation	Unconjugated	
Note	For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.	
HOLE	Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.	



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#### DATA IMAGES



#### GTX135683-pro Lateral Flow Image

SARS-CoV-2 neutralizing antibody interferes with the binding of ACE2 and spike RBD proteins. The signal intensity of the test line (T) decreases due to competition by the neutralizing antibody, while the control line (C) demonstrates a valid test.

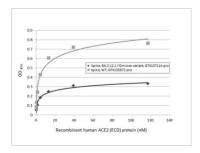
Neutralizing Antibody: Spike RBD antibody [HL1002] (GTX635791)

C Line

**Detector:** Colloidal gold-conjugated human ACE2 (ECO) protein (GTX135683-pro) / **Capture:** Anti-human ACE2 antibody (GTX635897)

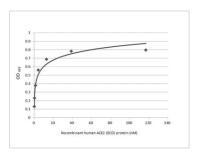
Tline

**Detector:** Colloidal gold-conjugated human ACE2 (ECO) protein (GTX135683-pro) / **Capture:** SARS-CoV-2 Spike RBD protein



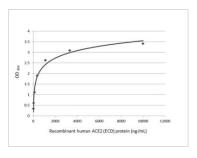
#### GTX135683-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.2.12.1 Omicron variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX135683-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike (ECD) Protein, BA.2 / Omicron variant, His tag (GTX137037-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



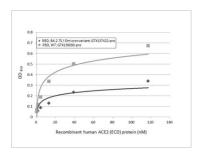
#### GTX135683-pro ELISA Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (4.5-10000 ng/mL). Bound protein was detected by ACE2 antibody [N1N2], N-term (GTX101395) (0.5  $\mu$ g/mL) and Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) detected bound primary antibody.

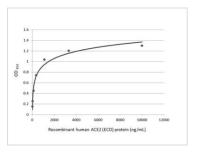


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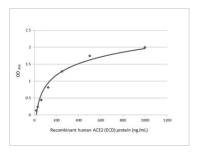


Functional ELISA analysis of immobilized recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.2.75 Omicron variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



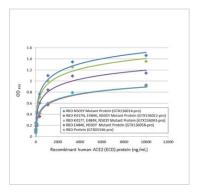
#### GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 spike (trimer) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (GTX135683-pro) (14-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



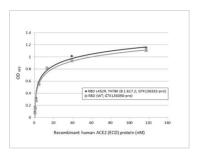
#### GTX135683-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag protein (GTX135683-pro) (15.63-1000 ng/mL). Coated protein probed with ACE2 antibody [N1N2], N-term (GTX101395) (0.1  $\mu$ g/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) detected bound primary antibody.



# GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



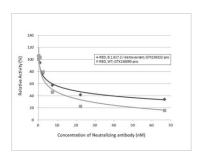
# GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant Spike RBD proteins of SARS-CoV-2 (COVID-19) derived from different strains (Delta variant B.1.617.2 or Wide type strain) (2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



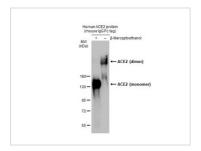
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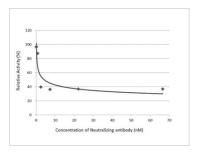
#### GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant RBD proteins derived from different strains of SARS-CoV-2 virus (Wild type or B1.617.2 delta variant) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



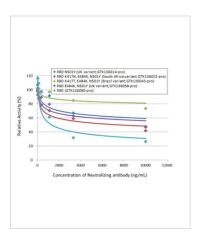
#### GTX135683-pro Image

GTX135683-pro Human ACE2 (ECD) protein , mouse IgG Fc tag protein (1 μg) were separated by 7.5% SDS-PAGE, and the membrane was blotted with ACE2 antibody [N1N2], N-term (GTX101395) diluted at 1:100000. The HRP-conjugated anti-rabbit IgG antibody (GTX213110-01) was used to detect the primary antibody.



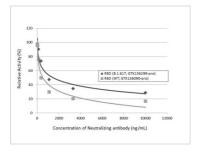
#### GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003-HU] (GTX635866) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



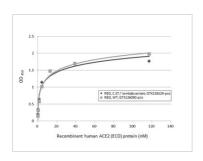
#### GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (13.72-10000 ng/mL). Bound was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



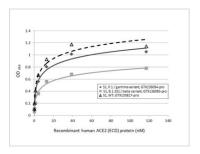
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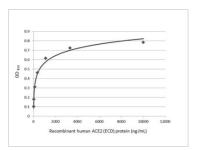
#### GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; C.37 lambda variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



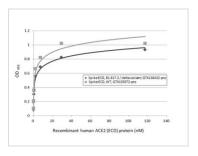
#### GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant Spike S1 protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B.1.351 beta variant; P.1 gamma variant) (coated at  $2 \mu g/mL$ ) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



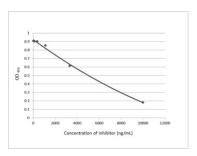
#### GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



# GTX135683-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B1.617.2 delta variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.03-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



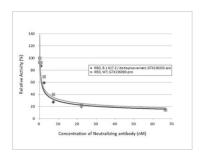
#### GTX135683-pro ELISA Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike S1 protein, His tag (active) (GTX01554-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (14-10000 ng/mL). Bound ACE2 protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



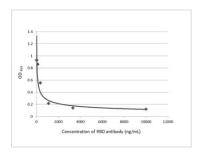
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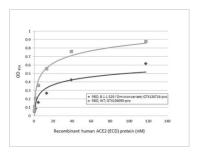
# GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, AY.1 / Delta plus variant, His tag (delta plus variant) (GTX136333-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (wild type) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



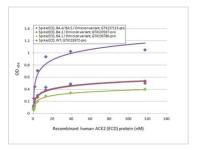
## GTX135683-pro Functional Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



# GTX135683-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B.1.1.529 Omicron variant) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX135683-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.1 Omicron variant; BA.2 Omicron variant; BA.4/BA.5 Omicron variant) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



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# SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 / Alpha variant, His tag (active)

# Cat. No. GTX136014-pro

Application	Binding Assay, WB, ELISA, Sandwich ELISA	Reference (2)
Species	SARS Coronavirus 2	Package 100 μg

#### **APPLICATION**

#### **Application Note**

Recommended antibody pair for sandwich ELISA: Capture: GTX635807, Detection: GTX635792-01 / GTX635793-01

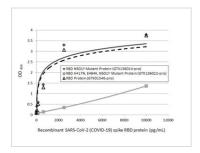
PROPERTIES	
Form	Liquid
Buffer	PBS
Preservative	No preservative
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.
Concentration	0.8 mg/ml (Please refer to the vial label for the specific concentration.)
Region/Sequence SARS-CoV-2 Spike RBD of QHD43416.1 (319-541 a.a) with N501Y mutation and His tag at the C-terminus	
Expression System	HEK293 cells
Purity	>95%
Conjugation	Unconjugated
Note	For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.
Note	Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.



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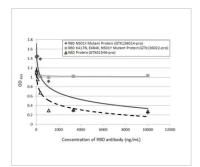
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#### DATA IMAGES



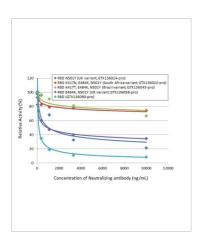
#### GTX136014-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5 µg/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (HRP) (GTX635793-01) as detection antibody at concentration of 1 µg/mL



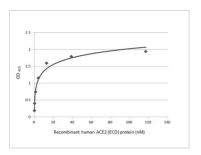
#### GTX136014-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) (14-10000 ng/mL). Bound ACE2 protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136014-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



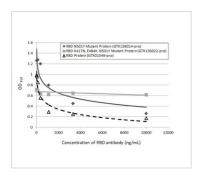
#### GTX136014-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 / Alpha variant, His tag (active) (GTX136014-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

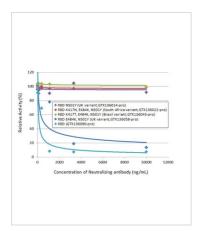


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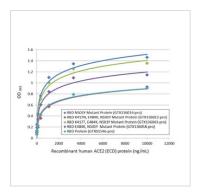


Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (14-10000 ng/mL). Bound ACE2 protein was detected by Goat Anti-Mouse IgG antibody (HRP) (13111-01) (1:10000).



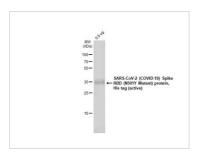
#### GTX136014-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136014-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



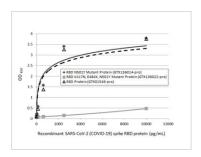
# GTX136014-pro Image

0.5µg of GTX136014-pro SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) was analyzed using SDS-PAGE and stained with coomassie blue and captured by monochrome camera.



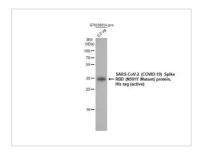
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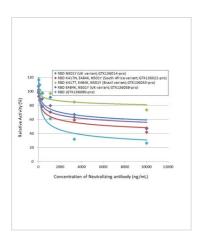
#### GTX136014-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) as detection antibody at concentration of 1  $\mu$ g/mL



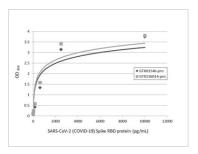
#### GTX136014-pro WB Image

SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro,  $0.2 \mu g$ ) was separated by 12% SDS-PAGE, and the membrane was blotted with the SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257] (GTX635692) diluted at 1:5000.



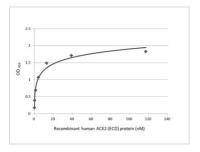
#### GTX136014-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136014-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) and SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) as detection antibody at concentration of 1  $\mu$ g/mL



# GTX136014-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 / Alpha variant, His tag (active) (GTX136014-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



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# SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.351 / Beta variant, His tag (active)

# Cat. No. GTX136022-pro

Application	Binding Assay, WB, ELISA, Sandwich ELISA	Reference (1)
Species	SARS Coronavirus 2	Package 100 μg

#### **APPLICATION**

#### **Application Note**

Recommended antibody pair for sandwich ELISA: Capture: GTX635807, Detection: GTX635792-01 / GTX635793-01

PROPERTIES		
Form	Liquid	
Buffer	PBS	
Preservative	No preservative	
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.	
Concentration	0.4 mg/ml (Please refer to the vial label for the specific concentration.)	
Region/Sequence	Region/Sequence SARS-CoV-2 Spike RBD of QHD43416.1 (319-541 a.a) with K417N, E484K, and N501Y mutations and His tag at the C-terminus	
Expression System	HEK293 cells	
Purity	>95%	
Conjugation	Unconjugated	
Note	For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.	
Note	Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.	

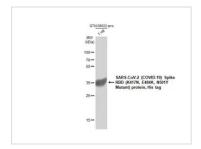


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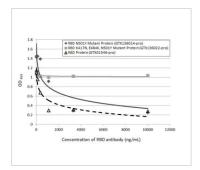


#### DATA IMAGES



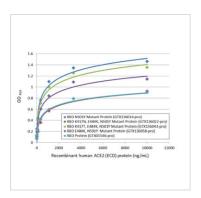
#### GTX136022-pro WB Image

SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (GTX136022-pro, 1  $\mu$ g) was separated by 12% SDS-PAGE, and the membrane was blotted with the SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257] (GTX635692) diluted at 1:5000.



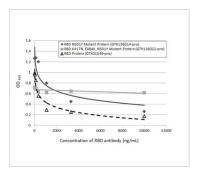
#### GTX136022-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) (14-10000 ng/mL). Bound ACE2 protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136022-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



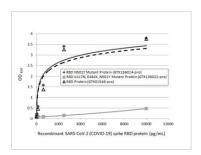
# GTX136022-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (14-10000 ng/mL). Bound ACE2 protein was detected by Goat Anti-Mouse IgG antibody (HRP) (13111-01) (1:10000).



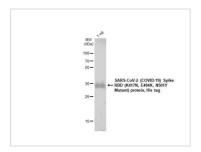
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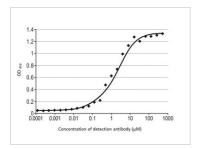
#### GTX136022-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5 µg/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) as detection antibody at concentration of 1 µg/mL.



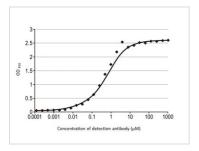
#### GTX136022-pro Image

1µq of GTX136022-pro SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag was analyzed using SDS-PAGE and stained with coomassie blue and captured by monochrome camera.



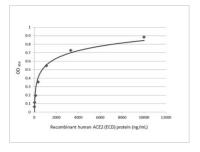
#### GTX136022-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro) (50 ng). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (1000-1.19\*10<sup>-4</sup> μM). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody. EC50: 1.30 μM



#### GTX136022-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro) (50 ng). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (1000-1.19\*10<sup>-4</sup> μM). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody. EC50: 0.43 μM



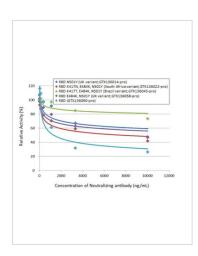
#### GTX136022-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

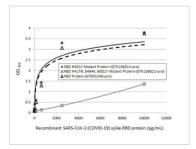


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Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136022-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5 µg/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (HRP) (GTX635793-01) as detection antibody at concentration of 1  $\mu$ g/mL.

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# SARS-CoV-2 (COVID-19) Spike RBD Protein, P.1 / Gamma variant, His tag (active)

# Cat. No. GTX136043-pro

Application	Binding Assay, WB, ELISA	Package 100 µg
Species	SARS Coronavirus 2	

## APPLICATION

#### **Application Note**

Capture: GTX635807, Detection: GTX635791-01

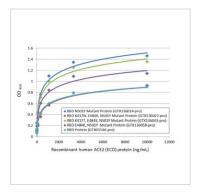
PROPERTIES		
Form	Lyophilized powder	
Buffer	Reconstitute with distilled water to 0.8 mg/ml. Lyophilized from PBS, 2% Trehalose, 5% Mannitol, 0.01% Tween-80.	
Preservative	No Preservative	
Storage	Store at 4°C or below. After reconstitution, keep as concentrated solution. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.	
Region/Sequence	SARS-CoV-2 Spike RBD of QHD43416.1 (319-541 a.a) with K417T, E484K, and N501Y mutations and His tag at the Cterminus	
Expression System	HEK293 cells	
Purity	>95%	
Conjugation	Unconjugated	
Note	For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.	
Note	Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.	



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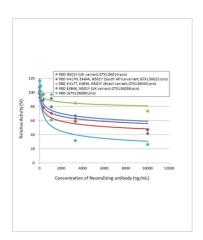
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#### DATA IMAGES



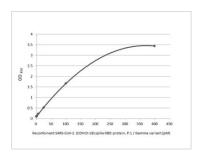
#### GTX136043-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136043-pro Binding Assay Image

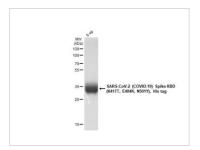
Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136043-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, P.1 / Gamma variant, His tag (active) (GTX136043-pro) using antibodies as below.

**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (HRP) (GTX635791-01) (1 μg/mL)



#### GTX136043-pro Image

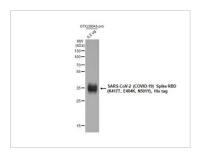
 $5~\mu g$  of GTX136043-pro SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y), His tag protein was analyzed using SDS-PAGE and stained with coomassie blue and captured by monochrome camera.



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#### GTX136043-pro WB Image

SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y), His tag protein (GTX136043-pro,  $0.2~\mu g$ ) was separated by 12% SDS-PAGE, and the membrane was blotted with the SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257] (GTX635692) diluted at 1:5000.



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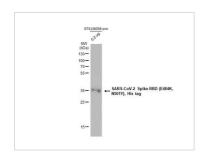
# SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 with E484K, His tag (active)

# Cat. No. GTX136058-pro

Application	Binding Assay, WB	Package 100 μg
Species	SARS Coronavirus 2	13

PROPERTIES	
Form	Liquid
Buffer	PBS
Preservative	No preservative
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.
Concentration	1 mg/ml (Please refer to the vial label for the specific concentration.)
Region/Sequence	SARS-CoV-2 Spike RBD of QHD43416.1 (319-541 a.a) with E484K and N501Y mutations and His tag at the C-terminus
Expression System	HEK293 cells
Purity	>95%
Conjugation	Unconjugated
Note	For <i>In vitro</i> laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

## DATA IMAGES



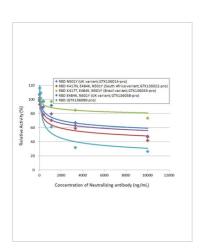
#### GTX136058-pro WB Image

SARS-CoV-2 Spike RBD (E484K, N501Y), His tag protein (GTX136058-pro, 0.2  $\mu$ g) was separated by 12% SDS-PAGE, and the membrane was blotted with the SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257] (GTX635692) diluted at 1:5000.

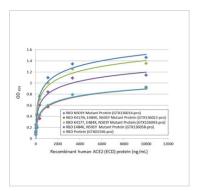


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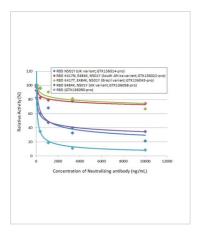


Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



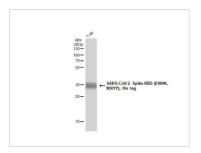
#### GTX136058-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### **GTX136058-pro Binding Assay Image**

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (HL1004) (GTX635793) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



#### GTX136058-pro Image

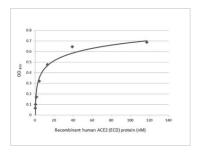
 $1~\mu g$  of GTX136058-pro SARS-CoV-2 Spike RBD (E484K, N501Y), His tag protein was analyzed using SDS-PAGE and stained with coomassie blue and captured by monochrome camera.



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Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, B.1.1.7 with E484K, His tag (active) (GTX136058-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



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# SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active)

# Cat. No. GTX136090-pro

Application	Binding Assay, WB, ELISA, Sandwich ELISA	Reference (1)
Species	SARS Coronavirus 2	Package 100 μg

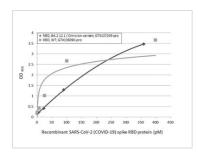
# <u>APPL</u>ICATION

#### **Application Note**

Recommended antibody pairs for sandwich ELISA: Capture: GTX635807, Detection: GTX635791-01.

PROPERTIES	
Form	Liquid
Buffer	PBS
Preservative	No preservative
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles. For long-term storage after reconstitution, aliquot and store at -70°C or below. Do not vortex.
Concentration	0.7 mg/ml (Please refer to the vial label for the specific concentration.)
Region/Sequence	SARS-CoV-2 Spike RBD of QHD43416.1 (319-541 a.a) and His tag at the C-terminus
Expression System	HEK293 cells
Purity	>95%
Conjugation	Unconjugated
Note	For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.
	Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.

#### DATA IMAGES



# GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.2.12.1 Omicron variant) using antibodies as below.

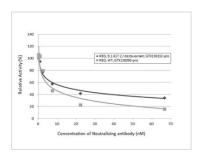
Capture: SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL)

Detection: SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) (1 μg/mL)

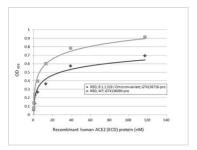


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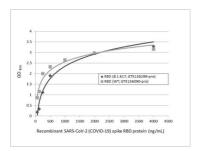


Inhibition analysis of immobilized recombinant RBD proteins derived from different strains of SARS-CoV-2 virus (Wild type or B1.617.2 delta variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



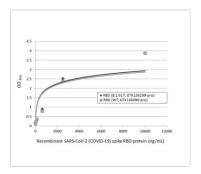
#### GTX136090-pro Binding Assay Image

Functional ELISA analysis of immobilized recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B.1.1.529 Omicron variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



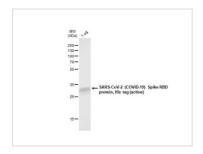
#### GTX136090-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (4000-62.5 ng/mL). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1 µg/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



#### GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL. Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



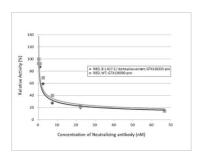
#### GTX136090-pro Image

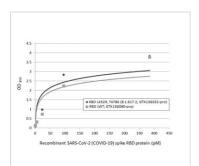
 $1~\mu g$  of GTX136090-pro SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) protein was analyzed using SDS-PAGE and stained with coomassie blue and captured by monochrome camera.

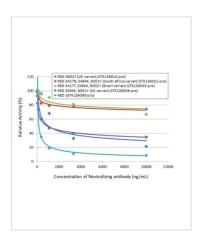


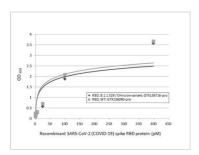
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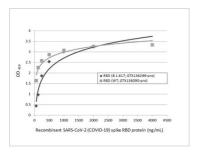
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Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, AY.1 / Delta plus variant, His tag (delta plus variant) (GTX136333-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (wild type) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

#### GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, T478K Mutant) protein, His tag (Delta variant) (GTX136332-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL. Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.

#### GTX136090-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

#### GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B.1.1.529 Omicron variant) using antibodies as below.

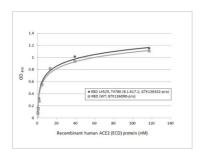
**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (HRP) (GTX635791-01) (1 μg/mL)

#### GTX136090-pro ELISA Image

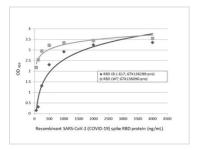
Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (4000-62.5 ng/mL). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (GTX635793) (1  $\mu$ g/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.

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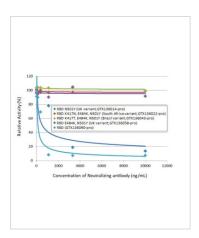


Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, T478K Mutant) protein, His tag (Delta variant) (GTX136332-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



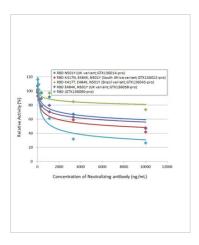
#### GTX136090-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (4000-62.5 ng/mL). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) (1 µg/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



#### GTX136090-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



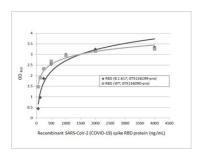
#### GTX136090-pro Binding Assay Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK variant) (GTX136058pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2 μg/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody (GTX135709) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



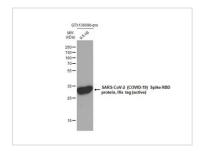
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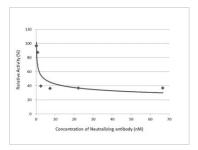
#### GTX136090-pro ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (4000-62.5 ng/mL). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (1 µg/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



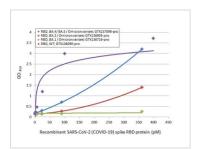
#### GTX136090-pro WB Image

SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) protein (GTX136090-pro,  $0.5~\mu g$ ) was separated by 12% SDS-PAGE, and the membrane was blotted with the SARS-CoV-2 (COVID-19) Spike RBD antibody [HL257] (GTX635692) diluted at 1:5000.



#### GTX136090-pro Binding Assay Image

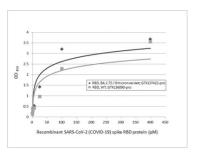
Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003-HU] (GTX635866) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



# GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.1 Omicron variant; BA.2 Omicron variant; BA.4/ BA.5 Omicron variant) using antibodies as below.

**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1004] (HRP) (GTX635793-01) (1 μg/mL)



# GTX136090-pro ELISA Image

Sandwich ELISA detection of recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.2.75 Omicron variant) using antibodies as below.

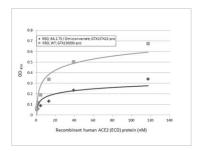
**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) (1 μg/mL)



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Functional ELISA analysis of immobilized recombinant Spike RBD Protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; BA.2.75 Omicron variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (0.16-117.19 nM). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



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# SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002]

## Cat. No. GTX635791

Host	Rabbit
Clonality	Monoclonal
Isotype	lgG
Application	ELISA, Lateral Flow, Neutralizing/Inhibition, Sandwich ELISA
Reactivity	SARS Coronavirus 2



## APPLICATION

#### **Application Note**

\*Optimal dilutions/concentrations should be determined by the researcher.

Suggested dilution	Recommended dilution
ELISA	Assay dependent
Lateral Flow	Assay dependent
Neutralizing/Inhibition	Assay dependent
Sandwich ELISA	Assay dependent

Note: Capture: GTX632604 / GTX635792 / GTX635807, Detection: GTX635791 / GTX635791-01 or Capture: GTX635791, Detection: GTX635807 / GTX635792-01.

Please notice that the detection antibody needs to be conjugated to HRP to function as the detection antibody when paired with the capture antibody. Please contact us for custom HRP-conjugated antibody.

Not tested in other applications.

PROPERTIES	
Form	Liquid
Buffer	PBS
Preservative	No preservative
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. For short-term storage (1-2 weeks), store at 4°C. For long-term storage, aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.
Concentration	1 mg/ml (Please refer to the vial label for the specific concentration.)
Immunogen	Full length SARS-coV-2 RBD recombinant protein. (Wuhan-Hu-1)
Purification	Affinity purified by Protein A.
Conjugation	Unconjugated



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€ 886-3-6208988 📻 886-3-6208989 🐷 infoasia@genetex.com

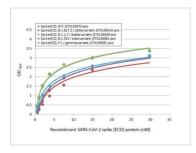


For laboratory research use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

#### Note

Purchasers shall not, and agree not to enable third parties to, analyze, copy, reverse engineer or otherwise attempt to determine the structure or sequence of the product.

#### DATA IMAGES



#### GTX635791 ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B.1.1.7 alpha variant; B.1.351 beta variant; P.1 gamma variant; B1.617.2 delta variant) (29.71-0.46 nM). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL). Goat anti-rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



#### GTX635791 Lateral Flow Image

SARS-CoV-2 neutralizing antibody interferes with the binding of ACE2 and spike RBD proteins. The signal intensity of the test line (T) decreases due to competition by the neutralizing antibody, while the control line (C) demonstrates a valid test.

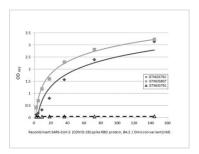
Neutralizing Antibody: Spike RBD antibody [HL1002] (GTX635791)

C Line

**Detector:** Colloidal gold-conjugated human ACE2 (ECO) protein (GTX135683-pro) / **Capture:** Anti-human ACE2 antibody (GTX635897)

T Line:

**Detector:** Colloidal gold-conjugated human ACE2 (ECO) protein (GTX135683-pro) / **Capture:** SARS-CoV-2 Spike RBD protein



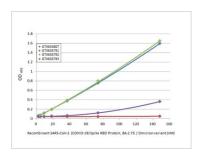
#### GTX635791 ELISA Image

Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, BA.2 / Omicron variant, His tag (GTX136905-pro) (143.73-2.25 nM). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792), SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807), and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL). Goat anti-rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.

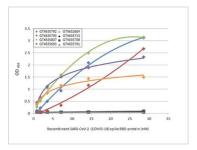


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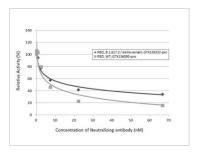


Indirect ELISA analysis was performed by coating the plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, Omicron / BA.2.75 variant, His tag (GTX137422-pro) (148.15-2.31 nM). Coated protein was probed with the specified SARS-CoV-2 (COVID-19) Spike RBD antibodies (1  $\mu$ g/mL). Goat anti-rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect the bound primary antibody.



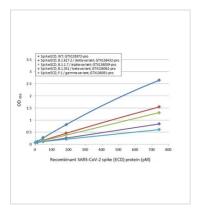
#### GTX635791 ELISA Image

Indirect ELISA analysis was performed by coating the plate with recombinant SARS-CoV-2 spike (ECD) trimer, omicron BA.2.75 variant, His tag (GTX137533-pro) (28.62-0.45 nM). Coated protein was probed with (the specified SARS-CoV-2 (COVID-19) Spike antibodies) (1  $\mu$ g/mL). Goat anti-rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect the bound primary antibody.



#### GTX635791 Neutralizing/Inhibition Image

Inhibition analysis of immobilized recombinant RBD proteins derived from different strains of SARS-CoV-2 virus (Wild type or B1.617.2 delta variant) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

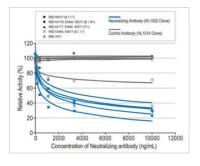


#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B1.617.2 delta variant; B.1.1.7 alpha variant; B.1.351 beta variant; P.1 gamma variant) using antibodies as below.

**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1 μg/mL)

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



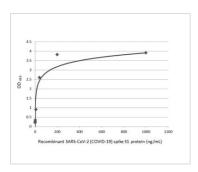
#### GTX635791 Neutralizing/Inhibition Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD proteins of WT and viral variants (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



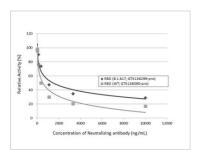
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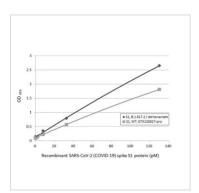
Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike S1 protein, His tag (active) (GTX01554-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as detection antibody at concentration of 1  $\mu$ g/mL.

Please notice that GTX635807 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635791. Please contact us for custom HRP-conjugated antibody.



#### GTX635791 Neutralizing/Inhibition Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (13.72-10000 ng/mL). Bound was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

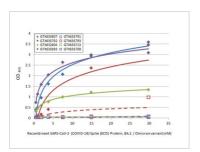


#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant Spike S1 proteins derived from different strains of SARS-CoV-2 virus (Wild type or B1.617.2 delta variant) using antibodies as below.

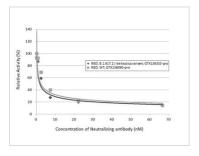
**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5  $\mu$ g/mL) **Detection:** HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL).

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



#### GTX635791 ELISA Image

Indirect ELISA analysis was performed by coating the plate with recombinant SARS-CoV-2 (COVID-19) Spike (ECD) Protein, BA.2 / Omicron variant, His tag (GTX137037-pro) (29.71-0.46 nM). Coated protein was probed with the specified SARS-CoV-2 (COVID-19) Spike antibodies (1  $\mu$ g/mL). Goat anti-rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) or goat anti-mouse IgG antibody (HRP) (GTX213111-01) (1:10000) were used to detect the bound primary antibodies.



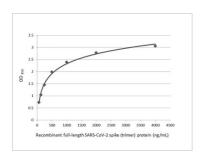
#### GTX635791 Neutralizing/Inhibition Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, AY.1 / Delta plus variant, His tag (delta plus variant) (GTX136333-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (wild type) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL) ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (0.09-66.67 nM). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

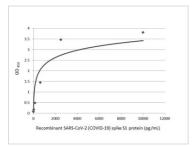


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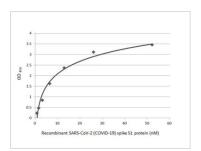
Sandwich ELISA detection of recombinant SARS-CoV-2 spike (trimer) protein using SARS-CoV / SARS-CoV-2 (COVID-19) spike antibody [1A9] (GTX632604) as capture antibody at concentration of 5  $\mu$ g/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL. Rabbit IgG antibody (HRP) (GTX213110-01) was diluted at 1:10000 and used to detect the primary antibody.



#### GTX635791 ELISA Image

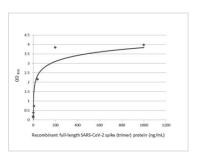
Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL.

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



## GTX635791 ELISA Image

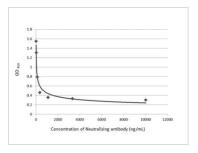
Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 Spike S1 (T19R, G142D, EF156-157del, R158G, L452R, T478K, D614G, P681R), His Tag (delta variant) (52.15-0.81 nM). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 spike (trimer) protein using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



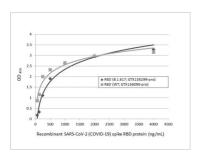
# GTX635791 Neutralizing/Inhibition Image

Inhibition analysis of immobilized recombinant SARS-CoV-2 spike (trimer) protein (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (13.72-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).

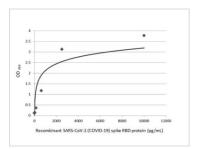


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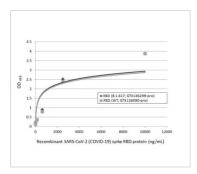


Indirect ELISA analysis performed by coating plate with recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (4000-62.5 ng/mL). Coated protein was probed with SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL). Rabbit IgG antibody (HRP) (GTX213110-01) (1:10000) was used to detect bound primary antibody.



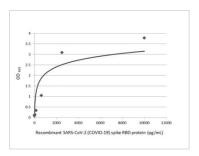
#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as capture antibody at concentration of 5  $\mu$ g/mL and SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (HRP) (GTX635792-01) as detection antibody at concentration of 1  $\mu$ g/mL



#### GTX635791 ELISA Image

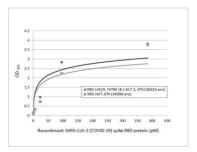
Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD (L452R, E484Q Mutant) protein, His tag (active) (Indian variant) (GTX136299-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL. Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (GTX01546-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1003] (GTX635792) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL.

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635792. Please contact us for custom HRP-conjugated antibody.



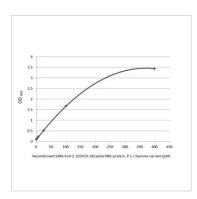
#### GTX635791 ELISA Image

Sandwich ELISA detection of recombinant Spike RBD proteins of SARS-CoV-2 (COVID-19) derived from different strains (Delta variant B.1.617.2 or Wide type strain) using the antibodies as follows. Capture: SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5  $\mu$ g/mL) Detection: HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1  $\mu$ g/mL) Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Contact us for custom HRP-conjugated antibody.



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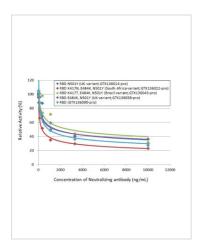
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Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike RBD Protein, P.1 / Gamma variant, His tag (active) (GTX136043-pro) using antibodies as below.

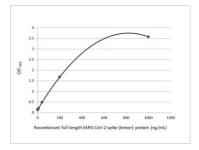
**Capture:** SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) (5 μg/mL) **Detection:** HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1 μg/mL)

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



#### GTX635791 Neutralizing/Inhibition Image

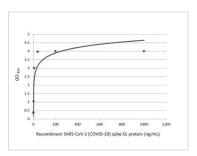
Inhibition analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike RBD (N501Y Mutant) protein, His tag (active) (UK variant) (GTX136014-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417N, E484K, N501Y Mutant) protein, His tag (active) (South Africa variant) (GTX136022-pro), SARS-CoV-2 (COVID-19) Spike RBD (K417T, E484K, N501Y Mutant) protein, His tag (active) (Brazil variant) (GTX136043-pro), SARS-CoV-2 (COVID-19) Spike RBD (E484K, N501Y Mutant) protein, His tag (active) (UK (Kent) variant) (GTX136058-pro) and SARS-CoV-2 (COVID-19) Spike RBD protein, His tag (active) (Wild type) (GTX136090-pro) (coated at 2  $\mu$ g/mL) binding to soluble recombinant Human ACE2 (ECD) protein, mouse IgG Fc tag (active) (GTX135683-pro) (1000 ng/mL). ACE2 binding was inhibited by increasing concentrations of SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (14-10000 ng/mL). Bound ACE2 was detected by Goat Anti-Mouse IgG antibody (HRP) (GTX213111-01) (1:10000).



# GTX635791 ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 spike (trimer) protein using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as detection antibody at concentration of 1  $\mu$ g/mL

Please notice that GTX635807 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635791. Please contact us for custom HRP-conjugated antibody.



#### GTX635791 ELISA Image

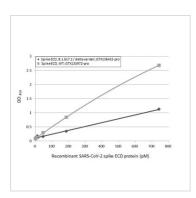
Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike S1 protein, His tag (active) (GTX01554-pro) using SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1014] (GTX635807) as capture antibody at concentration of 5  $\mu$ g/mL and HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) as detection antibody at concentration of 1  $\mu$ g/mL.

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



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Sandwich ELISA detection of recombinant Spike ECD protein(s) derived from different strains of SARS-CoV-2 virus (ie., Wild type; B1.617.2 delta variant) using antibodies as below.

 $\textbf{Capture:} \ \mathsf{SARS-CoV-2} \ (\mathsf{COVID-19}) \ \mathsf{Spike} \ \mathsf{RBD} \ \mathsf{antibody} \ [\mathsf{HL1014}] \ (\mathsf{GTX635807}) \ (5 \ \mu \mathsf{g/mL})$ 

**Detection:** HRP-conjugated SARS-CoV-2 (COVID-19) Spike RBD antibody [HL1002] (GTX635791) (1

սց/mL)

Please notice that GTX635791 needs to be conjugated to HRP to function as the detection antibody when paired with GTX635807. Please contact us for custom HRP-conjugated antibody.



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