SARS-CoV-2 (COVID-19) Spike (D614G Mutant)(ECD) protein, His tag (active)

Cat. No. GTX02575-pro

Application	ELISA, Functional Assay
Species	SARS Coronavirus 2

Package
100 µg

APPLICATION

Observed MW	190 kDa.

PROPERTIES

Form	Liquid
Buffer	PBS, 20% Glycerol
Preservative	No preservative
Storage	Store as concentrated solution. Centrifuge briefly prior to opening vial. Aliquot and store at -20ºC or below. Avoid multiple freeze-thaw cycles.
Concentration	Batch dependent (Please refer to the vial label for the specific concentration.)
Region/Sequence	C-terminal 8x His tagged; 16-1213 a.a. (Uniprot #P0DTC2, D614G variant). Full-length soluble with foldon trimerization motif, mutated Furin recognition site and 3 stabilising mutations (F817P, K986P and V987P), based on/modified from Hsieh et al, 2020.
Expression System	HEK293 cells
Purification	Purified by affinity chromatography
Purity	> 90% by SDS-PAGE
Endotoxin	< 1 EU/㎍ (Determined by LAL assay)
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.
Target Info	The original Wuhan strain of SARS CoV2 virus has become quickly replaced by its more transmissible variant, mainly determined by a single amino acid point mutation D614G of Spike protein.

For full product information, images and publications, please visit our website.

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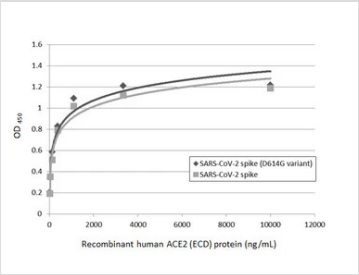
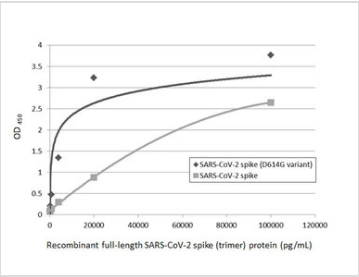
DATA IMAGES



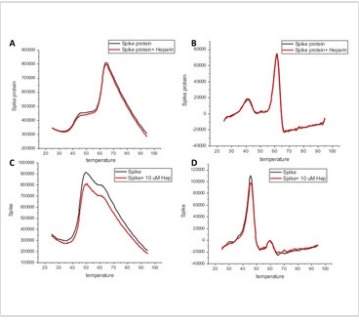
GTX02575-pro Functional Assay Image

Functional ELISA analysis of immobilized recombinant SARS-CoV-2 (COVID-19) Spike (D614G variant) protein, His tag (active) (GTX02575-pro), and SARS-CoV-2 spike (trimer) protein (coated at 2 µg/mL) binding to soluble recombinant Human ACE2 (ECD) protein , mouse IgG Fc tag (GTX135683-pro) (13-10000 ng/mL). Bound protein was detected by Goat Anti-Mouse IgG antibody (HRP) (13111-01) (1:10000).



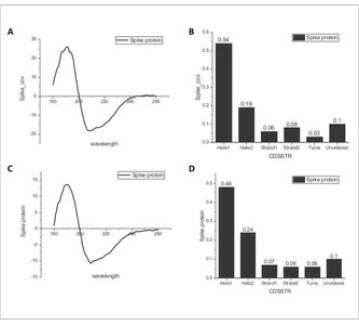
GTX02575-pro ELISA Image

Sandwich ELISA detection of recombinant SARS-CoV-2 (COVID-19) Spike (D614G variant) protein, His tag (active) (GTX02575-pro), and SARS-CoV-2 spike (trimer) protein 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.



GTX02575-pro Image

Differential scanning fluorimetry (DFS) analysis the stability and the heparin binding ability. DSF of proteins were performed in the absence or presence of heparin (10 µM). The scanning fluorimetry data of the two batches shows the protein is both stable and functional, with heparin binding activity.
A and C : Melting curve of spike protein.
B and D : First derivative of the melting curves of spike to show its melting temperature as peak.
A and B : the first batch of spike protein (PBS)
C and D : the second batch of spike protein (PBS, 20% glycerol).



GTX02575-pro Image

CD spectra of different cation forms of spike protein. The scanning fluorimetry data of the two batches shows the protein is both stable and functional, with heparin binding activity.
A and C : CD spectra were recorded on J-1100 spectrometer between 180 and 260 nm of spike protein (0.5 mg/ml).
B and D : Secondary structure were analysed by program CDSSTR of A and C, respectively.
A and B : the first batch of spike protein (PBS buffer).
C and D : the second batch of spike protein (PBS, 20% glycerol).

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