

SARS-CoV-2 S glycoprotein (D614G, HEK293, His)

Cat. No.:	HY-P72036
Synonyms:	E2 Peplomer protein
Species:	Virus
Source:	HEK293
Accession:	P0DTC2 (V16-R685, D614G)
Gene ID:	43740568
Molecular Weight:	Approximately 77.8 kDa

PROPERTIES

AA Sequence

V N L T T R T Q L P	P A Y T N S F T R G	V Y Y P D K V F R S	S V L H S T Q D L F
L P F F S N V T W F	H A I H V S G T N G	T K R F D N P V L P	F N D G V Y F A S T
E K S N I I R G W I	F G T T L D S K T Q	S L L I V N N A T N	V V I K V C E F Q F
C N D P F L G V Y Y	H K N N K S W M E S	E F R V Y S S A N N	C T F E Y V S Q P F
L M D L E G K Q G N	F K N L R E F V F K	N I D G Y F K I Y S	K H T P I N L V R D
L P Q G F S A L E P	L V D L P I G I N I	T R F Q T L L A L H	R S Y L T P G D S S
S G W T A G A A A Y	Y V G Y L Q P R T F	L L K Y N E N G T I	T D A V D C A L D P
L S E T K C T L K S	F T V E K G I Y Q T	S N F R V Q P T E S	I V R F P N I T N L
C P F G E V F N A T	R F A S V Y A W N R	K R I S N C V A D Y	S V L Y N S A S F S
T F K C Y G V S P T	K L N D L C F T N V	Y A D S F V I R G D	E V R Q I A P G Q T
G K I A D Y N Y K L	P D D F T G C V I A	W N S N N L D S K V	G G N Y N Y L Y R L
F R K S N L K P F E	R D I S T E I Y Q A	G S T P C N G V E G	F N C Y F P L Q S Y
G F Q P T N G V G Y	Q P Y R V V V L S F	E L L H A P A T V C	G P K K S T N L V K
N K C V N F N F N G	L T G T G V L T E S	N K K F L P F Q Q F	G R D I A D T T D A
V R D P Q T L E I L	D I T P C S F G G V	S V I T P G T N T S	N Q V A V L Y Q G V
N C T E V P V A I H	A D Q L T P T W R V	Y S T G S N V F Q T	R A G C L I G A E H
V N N S Y E C D I P	I G A G I C A S Y Q	T Q T N S P R R A R	

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 μm solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.

Endotoxin Level <1 EU/μg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH₂O.

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

SARS-CoV-2, causes the global pandemic coronavirus disease 2019 (Covid-19). SARS-CoV-2 belongs to a family of viruses known as coronaviruse. SARS-CoV-2 is the third human coronavirus this century known to cause pneumonia with a significant case-fatality rate.

SARS-CoV-2 is comprised of four structural proteins: Spike protein (S protein), Envelope protein (E), Membrane protein (M), and Nucleocapsid protein (N).

D614G does not alter S protein synthesis, processing, or incorporation into SARS-CoV-2 particles, but D614G affinity for ACE2 is reduced due to a faster dissociation rate. The D614G substitution results in significantly higher pseudovirus titres in multiple cell types, suggesting that spike G614 might be associated with enhanced entry into cells and enhanced replication in airways^{[1][2]}.

REFERENCES

- [1]. Leonid Yurkovetskiy, et al. Structural and Functional Analysis of the D614G SARS-CoV-2 Spike Protein Variant. *Cell*. 2020 Oct 29;183(3):739-751.e8.
- [2]. Jessica A Plante, et al. Spike mutation D614G alters SARS-CoV-2 fitness. *Nature*. 2021 Apr;592(7852):116-121.
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Caution: Product has not been fully validated for medical applications. For research use only.

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