

Product Data Sheet



Recombinant SARS-CoV-2 Spike (R682S) Protein

Product Code: 39503

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Description:

Recombinant SARS-CoV-2 Spike (R682S) protein lysate with a mutation at amino acid position 682, full length. Protein is expressed in baculovirus expression system in insect cells using the patented KREX™ functional proteomics technology.

Expression System:

Insect cell

GenBank Accession:

YP_009724390.1

Synonym:

COVID-19, 2019-nCoV, SARS Coronavirus 2, S protein

Protein Length:

1273aa

Expected Molecular Weight:

141.13kDa calculated from the sequence below

(https://www.bioinformatics.org/sms/prot_mw.html)

Form:

Liquid (Crude lysates)

Lysis Buffer:

25mM HEPES, 50mM KCl, 4mM CaCl₂, 20mM MgCl₂, 20% Glycerol, 0.2% Triton X-100, 0.2% BSA, 2mM DTT, 1 tablet Protease inhibitor (in 5mL buffer)

Storage Conditions:

-80° C, Avoid Freeze/Thaw Cycles

Stability:

Lysates are stable for up to 18 months from production date

Shipping:

Frozen shipment in dry ice

Authorised Uses:

For Research Use Only*

Applications:

Identification, development or production of a high-affinity vaccine; Development of an antigen-based COVID-19 sero-diagnostic test; Characterisation of full-length, correctly folded and functional SARS-CoV-2 antigens.

Sequence:

>SARS-CoV-2-SP_R682S

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1 MFVFLVLLPL VSSQCVNLTT RTQLPPAYTN SFTRGVYYPD KVFRSSVLHS TQDLFLPFFS
61 NVTWFHAIHV SGTNGTKRFD NPVLPFNDGV YFASTEKSN IIRGWIFGTTL DSKTQSLLI
121 NNATNVVIKV CEFQFCNDPF LGVYHKNK SWMESEFRVY SSANNCTFEY VSQPFMLDLE
181 GKQGNFNLR EFWFKNIDGY FKIYSKHTPI NLVRDLPQGF SALEPLVDLP IGINITRFQT
241 LLALHRSYLT PGDSSSGWTA GAAAYVGYL QPRTFLKYN ENGTITDAVD CALDPLSETK
301 CTLKSFTVEK GIYQTSNFRV QPTESIVRFP NITNLCPFGE VFNATRFSV YAWNKRKISN
361 CVADYSVLYN SASFSTFKCY GVSPTKLNLD CFTNVYADSF VIRGDEVROI APGQTGKIAD
421 YNYKLPDDFT GCVIAWNSNN LDSKVGNYN YLYRFRKSN LKPFERDIST EIYQAGSTPC
481 NGVEGFNCYF PLQSYGFQPT NGVGYQPYRV VVLSFELLHA PATVCGPKKS TNLVKNKCVN
541 FNFNGLTGTG VLTESNKKFL PFQQFGRDIA DTTDAVRDPQ TLEILDITPC SFGGVSVITP
601 GTNTSNQVAV LYQDVNCTEV PVAIHADQLT PTWRVYSTGS NVFQTRAGCL IGAEHVNNSY
661 ECDIPIGAGI CASYQTQNS SRRARSVASQ SIIAYTMSLG AENSVAYSNN SIAIPTNFTI
721 SVTTEILPVS MTKTSVDCM YICGDSTEC NLLQYGSFC TQLNRALTGI AVEQDKNTQE
781 VFAQVKQIYK TPPIKDFGGF NFSQILPDP KPSKRSFIED LFNKVTLAG AGFIKQYGDC
841 LGDIAARDLI CAQKFNGLTV LPPLLTDEMI AQYTSALLAG TITSGWTFGA GAALQIPFAM
901 QMAYRFNGIG VTQNVLYENQ KLIANQFNSA IGKIQDSLSS TASALGKLQD VVNQNAQALN
961 TLVKQLSSNF GAISSVLNDI LSRLDKVEAE VQIDRLITGR LQSLQTYVTQ QLIRAAEIRA
1021 SANLAATKMS ECVLGQSKRV DFCGKGYHLM SFPQSAPHGV VFLHVTVVPA QEKNFTTAPA
1081 ICHDGKAHFP REGVFSVNGT HWFVTQRNFY EPQIITDNT FVSGNCDVVI GIVNNTVYDP
1141 LQPELDSFKE ELDKYFKNHT SPDVDLGDIS GINASVVNIQ KEIDRLNEVA KNLNESLIDL
1201 QELGKYEQYI KWPWYIWLGF IAGLIAIVMV TIMLCMTSC CSCLKGCCSC GSCKFDEDD
1261 SEPVLKGVKL HYT
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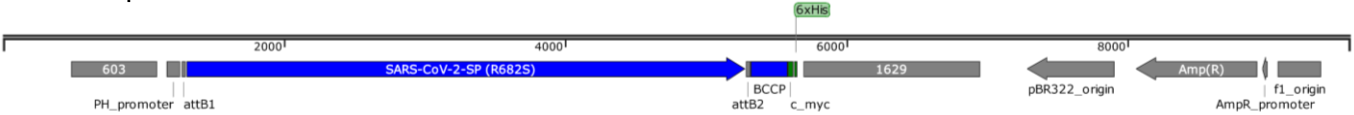
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Vector Map:



Sequence alignment with reference sequence (YP_009724390.1):

SARS-CoV-2-SP_R682S	MFVFLVLLPLVSSQCVNLTTRTQLPPAYTNSFTRGVYYPDKVFRSSVLHSTQDLFLPFFS	60
YP_009724390.1	MFVFLVLLPLVSSQCVNLTTRTQLPPAYTNSFTRGVYYPDKVFRSSVLHSTQDLFLPFFS	60

SARS-CoV-2-SP_R682S	NVTWFHAIHVSNGTKRFDNPFVLPFNDGVYFASTEKSNIIIRGWI FGTTLD SKTQSL LIV	120
YP_009724390.1	NVTWFHAIHVSNGTKRFDNPFVLPFNDGVYFASTEKSNIIIRGWI FGTTLD SKTQSL LIV	120

SARS-CoV-2-SP_R682S	NNATNVV I K V C E F Q F C N D P F L G V 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	180
YP_009724390.1	NNATNVV I K V C E F Q F C N D P F L G V 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	180

SARS-CoV-2-SP_R682S	GKQGNFKNLR 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	240
YP_009724390.1	GKQGNFKNLR 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	240

SARS-CoV-2-SP_R682S	LLALHRSYLT P G D S S S G W T A G A A A 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	300
YP_009724390.1	LLALHRSYLT P G D S S S G W T A G A A A 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	300

SARS-CoV-2-SP_R682S	CTLKSF 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	360
YP_009724390.1	CTLKSF 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	360

SARS-CoV-2-SP_R682S	CVADYSVL 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	420
YP_009724390.1	CVADYSVL 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	420

SARS-CoV-2-SP_R682S	YNYKLP 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 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	480
YP_009724390.1	YNYKLP 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 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	480

SARS-CoV-2-SP_R682S	NGVEGF 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	540
YP_009724390.1	NGVEGF 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	540

SARS-CoV-2-SP_R682S	FNFNGL 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	600
YP_009724390.1	FNFNGL 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	600

SARS-CoV-2-SP_R682S	GTNTSNQ V A V L Y Q D 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	660
YP_009724390.1	GTNTSNQ V A V L Y Q D 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	660

SARS-CoV-2-SP_R682S	ECDIPIGAGI C A S Y Q T Q T N S P S R A R S V A S Q S I I A Y T M S L G A E N S V A Y S N N S I A I P T N F T I	720
YP_009724390.1	ECDIPIGAGI C A S Y Q T Q T N S P R A R S V A S Q S I I A Y T M S L G A E N S V A Y S N N S I A I P T N F T I	720

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SARS-CoV-2-SP_R682S YP_009724390.1	SVTTEILPVSMTKTSVDCTMYICGDSTECNSNLLQYGSFCTQLNRALTGIAVEQDKNTQE SVTTEILPVSMTKTSVDCTMYICGDSTECNSNLLQYGSFCTQLNRALTGIAVEQDKNTQE *****	780 780
SARS-CoV-2-SP_R682S YP_009724390.1	VFAQVKQIYKTPPIKDFGGFNFSQILPDPSPKSPKRSFIEDLLFNKVTLADAGFIKQYGDC VFAQVKQIYKTPPIKDFGGFNFSQILPDPSPKSPKRSFIEDLLFNKVTLADAGFIKQYGDC *****	840 840
SARS-CoV-2-SP_R682S YP_009724390.1	LGDIAARDLICAQKFNGLTVLPPLLTDEMIAYQTSALLAGTITSGWTFGAGAALQIPFAM LGDIAARDLICAQKFNGLTVLPPLLTDEMIAYQTSALLAGTITSGWTFGAGAALQIPFAM *****	900 900
SARS-CoV-2-SP_R682S YP_009724390.1	QMAYRFNGIGVTONVLYENQKLIANQFNLSAIGKIQDLSSTASALGKLDVNVNQAQALN QMAYRFNGIGVTONVLYENQKLIANQFNLSAIGKIQDLSSTASALGKLDVNVNQAQALN *****	960 960
SARS-CoV-2-SP_R682S YP_009724390.1	TLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYVTQQILIRAAEIRA TLVKQLSSNFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYVTQQILIRAAEIRA *****	1020 1020
SARS-CoV-2-SP_R682S YP_009724390.1	SANLAATKMSECVLQSKRVDFCGKGYHLSFQPSAPHGVSFLHVTVYVPAQEKNFATTAPA SANLAATKMSECVLQSKRVDFCGKGYHLSFQPSAPHGVSFLHVTVYVPAQEKNFATTAPA *****	1080 1080
SARS-CoV-2-SP_R682S YP_009724390.1	ICHDGKAHFPREGVFVSNGTWTFVQTRNFYEPQIITTDNTFVSGNCDVVIIVNNTVYDP ICHDGKAHFPREGVFVSNGTWTFVQTRNFYEPQIITTDNTFVSGNCDVVIIVNNTVYDP *****	1140 1140
SARS-CoV-2-SP_R682S YP_009724390.1	LQPELDSFKEELDQYFKNHTSPDVLGDISGINASVUNIQKEIDRLNEVAKNLNESLIDL LQPELDSFKEELDQYFKNHTSPDVLGDISGINASVUNIQKEIDRLNEVAKNLNESLIDL *****	1200 1200
SARS-CoV-2-SP_R682S YP_009724390.1	QELGKYEQYIKWPWYIWLGFIAGLIAIVMVTIMLCCMTSCCCLKGCSCGSCCKFDEDD QELGKYEQYIKWPWYIWLGFIAGLIAIVMVTIMLCCMTSCCCLKGCSCGSCCKFDEDD *****	1260 1260
SARS-CoV-2-SP_R682S YP_009724390.1	SEPVKGVKLVHVT 1273 SEPVKGVKLVHVT 1273 *****	

References:

1. Sengenics KREX™ proteomics technology [<https://www.sengenics.com/krex/>]
2. KREX™ is protected by multiple international patents worldwide [<https://www.sengenics.com/list-of-patents/>]
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4. Beeton-Kempen, Natasha et al. 2014. "Development of a Novel, Quantitative Protein Microarray Platform for the Multiplexed Serological Analysis of Autoantibodies to Cancer-Testis Antigens." *International journal of cancer* 135(8): 1842–51
5. Other References [<https://www.sengenics.com/sengenics-krex-publications/>]
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