

Supplement 2:

Deduced amino acid sequences of the S1 protein of the different variants used in the current study.

	|10	|20	|30	|40	|50	|60	|70	|80
NC_045512|Wuhan-Hu-1	MFVFLVLLPL	VSSQCVNLTT	RTQLPPAYTN	SFTRGVYYPD	KVFRSSVLHS	TQDLFLPFFS	NVTWFHAIHV	SGTNGTKRFD
Alpha|GRY|B.1.1.7|EPI_ISL_679974	.....	.....	.....	.....	.....	.....	--	.....
Beta|GH|B.1.351|EPI_ISL_2447894	.....	.....	.....	.....	.....	.....	.....	.....A
Delta|GK|B.1.617.2|EPI_ISL_3473491	.....	.....R.	.....	.....	.....	.....	.....	.....
Gamma|GR|P.1|EPI_ISL_3218258	.....	.....	.....	.....	.....	.....	.....	.....
Lambda|GR|C37|EPI_ISL_1534645	.....	.....	.....	.....	.....	.....	.....	.....
Mu|GH|UAL90205	...F.....	.....	.....	.....	.....	.....	.....	.....
Eta|G|B.1.525|EPI_ISL_760883	.....	.....	.....	.....	.....R.	.....	V--	.....
Iota|GH|B.1.526|EPI_ISL_3364539	...F.....	.....F.	.....	.....	.....	.....	.....	.....
Kappa|G|B.1.617.1|EPI_ISL_2758215	.....	.....	.....	.....	.....	.....	.....	.....
OMICRON|B.1.1.529|GR|EPI_ISL_6795850	.....	.....	.....	.....	.....	.....	V--	.....

	|90	|100	|110	|120	|130	|140	|150	
NC_045512|Wuhan-Hu-1	NPVLPFNDGV	YFASTEKSNI	IRGWIFGTTL	DSKTQSLIV	NNATNVVIKV	CEFQFCNDPF	LGV-YYHKNN	KSWMESEFRV
Alpha|GRY|B.1.1.7|EPI_ISL_679974	--
Beta|GH|B.1.351|EPI_ISL_2447894	-
Delta|GK|B.1.617.2|EPI_ISL_3473491	-G--
Gamma|GR|P.1|EPI_ISL_3218258	-
Lambda|GR|C37|EPI_ISL_1534645	-T.
Mu|GH|UAL90205I.....	.....	.....	.....	.....	TSN	.....
Eta|G|B.1.525|EPI_ISL_760883	--
Iota|GH|B.1.526|EPI_ISL_3364539I.....	.....	.....	.....	.....	-	.....
Kappa|G|B.1.617.1|EPI_ISL_2758215I.....	.....	.....	.....	.....	D-	.....
OMICRON|B.1.1.529|GR|EPI_ISL_6795850I.....	.....	.....	.....	.....	D---	.....

	|160	|170	|180	|190	|200	|210	|220	|230	
NC_045512|Wuhan-Hu-1	YSSANNCTFE	YVSQPFLMDL	EGKQGNFKNL	REFVFKNIDG	YFKIYSKHTP	INLVR---	DL	PQGFSALEPL	VDLPIGINIT
Alpha|GRY|B.1.1.7|EPI_ISL_679974	---	---
Beta|GH|B.1.351|EPI_ISL_2447894	---	G	.....	.....
Delta|GK|B.1.617.2|EPI_ISL_3473491	---	V	.....
Gamma|GR|P.1|EPI_ISL_3218258	---
Lambda|GR|C37|EPI_ISL_1534645	---
Mu|GH|UAL90205	---
Eta|G|B.1.525|EPI_ISL_760883	---
Iota|GH|B.1.526|EPI_ISL_3364539	---
Kappa|G|B.1.617.1|EPI_ISL_2758215	---
OMICRON|B.1.1.529|GR|EPI_ISL_6795850	-I	EPE	.....	.....

	|240	|250	|260	|270	|280	|290	|300	|310
NC_045512|Wuhan-Hu-1	RFQTLALHR	SYLTPGDSSS	GWTAGAAAYY	VGYLQPRFL	LKYNENGTIT	DAVDCALDPL	SETKCTLKSF	TVEKGIYQTS
Alpha|GRY|B.1.1.7|EPI_ISL_679974
Beta|GH||B.1.351_|EPI_ISL_2447894--....
Delta|GK|B.1.617.2|EPI_ISL_3473491
Gamma|GR|P.1|EPI_ISL_3218258
Lambda|GR|C37|EPI_ISL_1534645
Mu|GH|UAL90205
Eta|G|B.1.525|EPI_ISL_760883
Iota|GH|B.1.526|EPI_ISL_3364539G...	.....	.....	.....	.....	.....V	.....
Kappa|G|B.1.617.1|EPI_ISL_2758215
OMICRON|B.1.1.529|GR|EPI_ISL_6795850

	|320	|330	|340	|350	|360	|370	|380	|390
NC_045512|Wuhan-Hu-1	NFRVQPTESI	VRFPNITNLC	PFGEVFNATR	FASVYAWNRK	RISNCVADYS	VLYNSASFST	FKCYGVSPTK	LNDLCFTNVY
Alpha|GRY|B.1.1.7|EPI_ISL_679974
Beta|GH||B.1.351_|EPI_ISL_2447894
Delta|GK|B.1.617.2|EPI_ISL_3473491
Gamma|GR|P.1|EPI_ISL_3218258
Lambda|GR|C37|EPI_ISL_1534645
Mu|GH|UAL90205K	.....	.....	.....	.....	.....
Eta|G|B.1.525|EPI_ISL_760883
Iota|GH|B.1.526|EPI_ISL_3364539
Kappa|G|B.1.617.1|EPI_ISL_2758215
OMICRON|B.1.1.529|GR|EPI_ISL_6795850D.....	.....	.....	...L.P.F.	.....	.....

	|400	|410	|420	|430	|440	|450	|460	|470
NC_045512|Wuhan-Hu-1	ADSFVIRGDE	VRQIAPGQTG	KIADYNYKLP	DDFTGCVIAW	NSNNLDSKVG	GNYNLYRLF	RKSNLKPFER	DISTEIYQAG
Alpha|GRY|B.1.1.7|EPI_ISL_679974
Beta|GH||B.1.351_|EPI_ISL_2447894	N.....	.....	.....	.....	.....	.....
Delta|GK|B.1.617.2|EPI_ISL_3473491R...	.....	.....
Gamma|GR|P.1|EPI_ISL_3218258
Lambda|GR|C37|EPI_ISL_1534645
Mu|GH|UAL90205
Eta|G|B.1.525|EPI_ISL_760883
Iota|GH|B.1.526|EPI_ISL_3364539
Kappa|G|B.1.617.1|EPI_ISL_2758215R...	.....	.....
OMICRON|B.1.1.529|GR|EPI_ISL_6795850	N.....	.....	...K...S	.....	.....	.....

	|480	|490	|500	|510	|520	|530	|540	|550
NC_045512|Wuhan-Hu-1	STPCNGVEGF	NCYFPLQSYG	FQPTNGVGyQ	PYRVVLSFE	LLHAPATVCG	PKKSTNLVKN	KCVNFNFNGL	TGTGVLTESN
Alpha|GRY|B.1.1.7|EPI_ISL_679974	.....	.....	....Y.....	.....	.....	.....	.....	.....
Beta|GH||B.1.351_|EPI_ISL_2447894	.....K..	.....	....Y.....	.....	.....	.....	.....	.....
Delta|GK|B.1.617.2|EPI_ISL_3473491	.K.....	.....	.....	.....	.....	.....	.....	.....
Gamma|GR|P.1|EPI_ISL_3218258	.....	.....	.....	.....	.....	.....	.....	.....
Lambda|GR|C37|EPI_ISL_1534645	.....	.....	.....	.....	.....	.....	.....	.....
Mu|GH|UAL90205	.....K..	.....	....Y.....	.....	.....	.....	.....	.....
Eta|G|B.1.525|EPI_ISL_760883	.....K..	.....	.....	.....	.....	.....	.....	.....
Iota|GH|B.1.526|EPI_ISL_3364539	N.....	.....	.....	.....	.....	.....	.....	.....
Kappa|G|B.1.617.1|EPI_ISL_2758215	.....Q..	.....	.....	.....	.....	.....	.....	.....
OMICRON|B.1.1.529|GR|EPI_ISL_6795850	NK....A..	.....R..S	.R..Y...H.	.....	.....	.....	.....	K.....

	|560	|570	|580	|590	|600	|610	|620	|630
NC_045512|Wuhan-Hu-1	KKFLPFQQFG	RDIADTTDAV	RDPQTLEILD	ITPCSFQGVs	VITPGTNTSN	QVAVLYQDVN	CTEVPVAIHA	DQLTPTWRVY
Alpha|GRY|B.1.1.7|EPI_ISL_679974D.....	.....	.....	.....	.....G..	.....	.....
Beta|GH||B.1.351_|EPI_ISL_2447894G..	.....	.....
Delta|GK|B.1.617.2|EPI_ISL_3473491G..	.....	.....
Gamma|GR|P.1|EPI_ISL_3218258G..	.....	.....
Lambda|GR|C37|EPI_ISL_1534645G..	.....	.....
Mu|GH|UAL90205G..	.....	.....
Eta|G|B.1.525|EPI_ISL_760883G..	.....	.....
Iota|GH|B.1.526|EPI_ISL_3364539G..	.....	.....
Kappa|G|B.1.617.1|EPI_ISL_2758215G..	.....	.....
OMICRON|B.1.1.529|GR|EPI_ISL_6795850G..	.....	.....

	|640	|650	|660	|670	|680	|S2
NC_045512|Wuhan-Hu-1	STGSNVFQTR	AGCLIGAEHV	NNSYECDIPI	GAGICASYQT	QTNSPRRARS	
Alpha|GRY|B.1.1.7|EPI_ISL_679974H.....	
Beta|GH||B.1.351_|EPI_ISL_2447894	
Delta|GK|B.1.617.2|EPI_ISL_3473491R.....	
Gamma|GR|P.1|EPI_ISL_3218258	
Lambda|GR|C37|EPI_ISL_1534645	
Mu|GH|UAL90205H.....	
Eta|G|B.1.525|EPI_ISL_760883	H.....	
Iota|GH|B.1.526|EPI_ISL_3364539	
Kappa|G|B.1.617.1|EPI_ISL_2758215R.....	
OMICRON|B.1.1.529|GR|EPI_ISL_6795850Y.	.....	.....	..K.H.....	