



## Electronic Supplementary Material

### SARS-CoV-2 Genomic Sequencing Revealed N501Y and L452R Mutants of S/A Lineage in Tianjin Municipality, China

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**Table S1.** Information of specimens collection and genome-based typing results.

ID	Origin region	Date of collection	sample	China CDC Lineage	PANGO Lineage	Number of variant site
TJ_020604Y	USA	2020/3/23		L-Lineage European branch II.3	B.1	8
TJ_010604Y	—	2020/3/23		L-Lineage European branch II.1	B.1	7
TJ_030604Y	UK	2020/3/24		L-Lineage European branch II.3	B.1	6
TJ_080604Y	UK/Russia	2020/3/25		L-Lineage European branch I	B.1.1.1	6
TJ_070604Y	UK	2020/3/25		L-Lineage European branch	B.1	6
TJ_060604Y	USA	2020/3/25		L-Lineage European branch II.1	B.1	6
TJ_090604Y	—	2020/3/26		L-Lineage European branch I	B.1.1.29	7
TJ_150604Y	USA	2020/3/27		L-Lineage European branch II.1	B.1	8
TJ_040604Y	—	2020/3/29		L-Lineage European branch	B.1	7
TJ_170604Y	Spain	2020/3/29		L-Lineage European branch I	B.1.1.29	9
TJ_190604Y	Spain	2020/3/29		L-Lineage European branch	B.1	6
TJ_200604Y	Spain	2020/3/29		L-Lineage European branch	B.1	6
TJ_050604Y	—	2020/3/30		L-Lineage European branch	B.40	10
TJ_220604Y	—	2020/3/31		L-Lineage European branch	B.1	8
TJ_140604Y	—	2020/3/31		L-Lineage European branch	B.1.98	7
TJ_100604Y	—	2020/3/31		L-Lineage European branch	B.1	5
TJ_230604Y	UK	2020/4/2		L-Lineage European branch I	B.1.1.29	8
TJ_120604Y	—	2020/4/2		L-Lineage	B	7
TJ_250604Y	—	2020/4/8		S-Lineage	A	6
TJ_260604Y	France	2020/4/9		L-Lineage European branch II.2	B.1	10
TJ_240604Y	—	2020/4/13		L-Lineage European branch II.3	B.1	10
TJ_310604Y	France	2020/4/16		L-Lineage European branch II.2	B.1	6
TJ_300604Y	France	2020/4/16		L-Lineage European branch II.2	B.1	7
TJ_320604Y	France	2020/4/17		L-Lineage European branch	B.1.219	7
TJ_340604Y	France	2020/5/7		L-Lineage European branch	B.1.220	6
TJ_A103	Ukraine	2020/9/1		L-Lineage European branch II.1	B.1.2	18
TJ_A460_20201103	France	2020/9/24		L-Lineage European branch II.3	B.1.160	22
TJ_V2009060148	France	2020/9/24		L-Lineage European branch	B.1.177	17
TJ_A432	France	2020/10/8		L-Lineage European branch	B.1.177	18
TJ_A117	Czech	2020/10/15		L-Lineage European branch	B.1.258	19
TJ_J502	Ukraine	2020/10/15		L-Lineage European branch I	B.1.1.153	22
TJ_A410	Russia	2020/10/16		L-Lineage European branch I	B.1.1.31	19
TJ_A215	Philippines	2020/10/28		L-Lineage European branch II.3	B.1.36	17
TJ_A135	USA	2020/11/3		L-Lineage European branch I	B.1.1.306	26
TJ_W105	Congo	2020/11/5		L-Lineage European branch II.2	B.1	20
TJ_A315_20210121	USA	2020/11/10		L-Lineage European branch	B.1.400	25
TJ_A315_20201227	USA	2020/11/10		L-Lineage European branch	B.1.177	20
TJ_A218	USA	2020/11/10		L-Lineage European branch II.1	B.1.2	21
TJ_A221_20210113	USA	2020/11/10		L-Lineage European branch II.1	B.1.2	21
TJ_A511	France	2020/11/12		L-Lineage European branch	B.1.177	18
TJ_A403	Spain	2020/12/13		L-Lineage European branch	B.1.177	18
TJ_A106	Niger	2020/12/18		S-Lineage	A	24
TJ_20TF_FH15	Russia	2020/12/25		L-Lineage European branch I	B.1.1.1	19

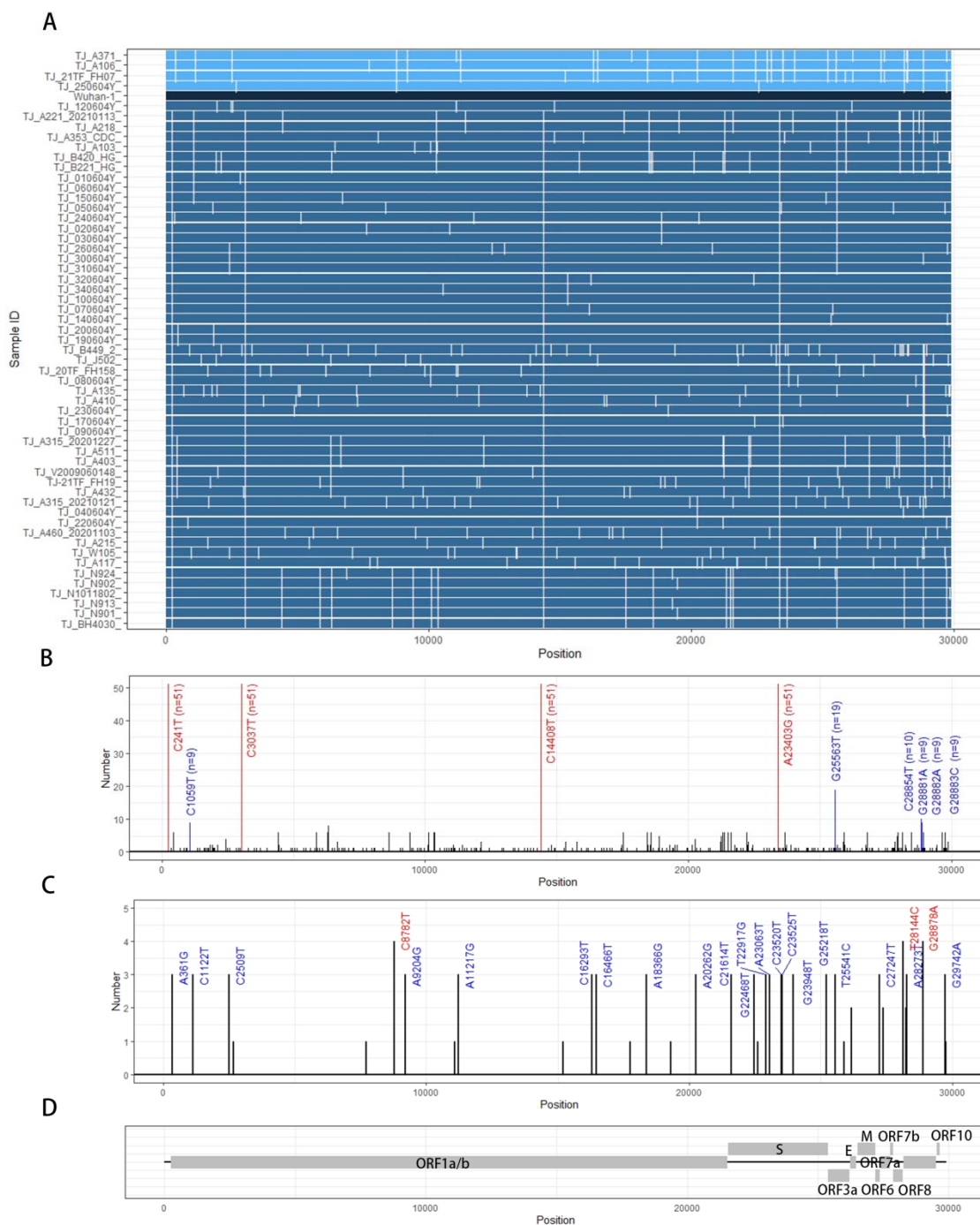
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TJ_B420_HG	USA	2020/12/28	L-Lineage European branch II.1	B.1.2	26
TJ_A353_CDC	USA	2021/1/4	L-Lineage European branch II.1	B.1.2	22
TJ_A371	Niger	2021/1/4	S-Lineage	A	27
TJ_B449_2	Ghana	2021/1/7	L-Lineage European branch I	B.1.1.7	34
TJ_N901	Singapore	2021/1/9	L-Lineage European branch	B.1.524	21
TJ_N913	Singapore	2021/1/9	L-Lineage European branch	B.1.524	22
TJ_N1011802	Singapore	2021/1/9	L-Lineage European branch	B.1.524	21
TJ_N902	Singapore	2021/1/9	L-Lineage European branch	B.1.524	21
TJ_N924	Singapore	2021/1/9	L-Lineage European branch	B.1.524	23
TJ_21TF_FH07	Spain	2021/1/10	S-Lineage	A	30
TJ-21TF_FH19	Spain	2021/1/16	L-Lineage European branch	B.1.177	25
TJ_BH4030	Philippines	2021/1/20	L-Lineage European branch	B.1.524	21
TJ_B221_HG	Philippines	2021/2/3	L-Lineage European branch II.1	B.1.2	24

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**Table S2.** Nucleotide variants and amino acid variants by aligning TJ\_A106, TJ\_21TF\_FH07 and TJ\_A371 to Wuhan-1 strain.

Gene	TJ_A106	TJ_21TF_FH07	TJ_A371	Amino acid variants
ORF1a/b	A361G	A361G	A361G	
	C1122T	C1122T	C1122T	P286L
	C2509T	C2509T	C2509T	P748
	C7735T			
	C8782T	C8782T	C8782T	
	A9204G	A9204G	A9204G	D2980G
			G11083T	
	A11217G	A11217G	A11217G	N3651S
		A15219G	A15219G	
	C16293T	C16293T	C16293T	
C16466T	C16466T	C16466T	P5401L	
		A17757G		
A18366G	A18366G	A18366G		
A20262G	A20262G	A20262G		
S	C21614T	C21614T	C21614T	L18F
	G22468T	G22468T	G22468T	
	T22917G	T22917G	T22917G	L452R
	A23063T	A23063T	A23063T	N501Y
	C23520T	C23520T	C23520T	A653V
	C23525T	C23525T	C23525T	H655Y
	G23948T	G23948T	G23948T	D796Y
	G25218T	G25218T	G25218T	G1219V
ORF3a	T25541C	T25541C	T25541C	V50A
		C25904T		S171L
		26160-26167del	26160-26167del	VNPV256-259VX
ORF6	C27247T	C27247T	ORF6C27247T	
		A27386del	A27386del	*62X
ORF8	ORF8T28144C	ORF8T28144C	ORF8T28144C	L84S
		28248-28253del	28248-28253del	DF119-120del
N	NA28273T	NA28273T	NA28273T	
	G28878A	G28878A	G28878A	S202N
ORF10		ORF10G29742A	ORF10G29742A	
3'UTR		3'UTRC29754T		



**Fig. S1** SNPs of SARS-CoV-2 genomes. **A** Genome alignment by MAFFT software and SNPs marked by white vertical lines by aligning the genomes with reference sequence of Wuhan-1 strain. **B** Number of SNPs of sequences which fall into L/B-lineage. **C** Number of SNPs of sequences which fall into S/A-lineage. **D** Genes of SARS-CoV-2 genome.