

Spike variants vs Wuhan-Hu1 (19A)

Variants of Concern (VOC)

Variants of Interest (VOI)

Common name:	UK	SA	CAL20C	P.1 Brazil	B.1.1.28.1	B.1.1.318	B.1.375	B.1.525	B.1.526	EU1	EU2	P.2 Brazil	B.1.616	B.1.617	B.1.214.2	A.23.1	A28	A27
PANGO name:	B.1.1.7	B.1.351	B.1.427	B.1.1.28.1						B.1.177	B.1.?	B.1.1.28.2					19B/501T	19B/501Y
Nextstrain name:	20I/501Y.V1	20H/501Y.V2	B1.429 20C	20J/501Y.V3						20A	20A	20?						

Neutralizing antibodies binding	13	Signal	L5F																				Signal			
		NTD	S1	S13I			I																	NTD		
				L18F		(F)			F																	F
				T20N					N																	
				P26S					S																	
				Q52R								R														
				H66D														D								
				del HV 69-70	Del							Del													Del	
				D80A			A																			
				T95I								I														
				R102I																						
				D138Y																						
				del Y 144	Del																					
	W152C							C																		
	F157L																									
	R190S																									
	ins214RTD																									
	D215G																									
	A222V																									
	del LAL 242-244																									
	D253G																									
	V367F																									
	Q414K																									
	K417N/T																									
	N450K																									
	L452R																									
	S477N																									
	V483A																									
	E484K/Q																									
	N501Y/T	Y	Y																							
	A570D	D																								
	Q613H																									
	D614G	G	G	G	G	G	G	G	G	G	G	G														
	A653V																									
	H655Y																									
	G669S																									
	Q677H																									
	P681H/R	H																								
	A701V																									
	T716I	I																								
	D796Y/H																									
	T859I																									
	F888L																									
	A899S																									
	Q949R																									
	S982A	A																								
	T1027I																									
	D1118H	H																								
	V1176F																									
	I1183V																									
	N1187D																									
	G1219V																									

Cleavage S1/S2 → 685
686

Cleavage S2' → 815
816

Fusion activity; modulates tropism
912 HR1
984

Fusion activity; modulates tropism
1163 HR2
1213