

Table S1. Sequences of SARS-CoV-2 genome submitted from January to October 2022

Country	Number of submitted virus	Start date	End date
USA	61596	Jan 5, 2022	Oct 2, 2022
Canada	22234	Jan 5, 2022	Oct 2, 2022
Australia	5961	Jan 5, 2022	Oct 2, 2022
Germany	60955	Jan 5, 2022	Oct 2, 2022
France	7930	Jan 5, 2022	Oct 2, 2022
England	19110	Jan 5, 2022	Oct 2, 2022
Italy	9204	Jan 5, 2022	Oct 2, 2022
Russia	1191	Jan 5, 2022	Oct 2, 2022
China	143	Jan 5, 2022	Oct 2, 2022
Japan	6815	Jan 5, 2022	Oct 2, 2022
South Korea	5014	Jan 5, 2022	Oct 2, 2022
India	12353	Jan 5, 2022	Oct 2, 2022
Iceland	129	Jan 5, 2022	Oct 2, 2022
Brazil	1476	Jan 5, 2022	Oct 2, 2022
Spain	6206	Jan 5, 2022	Oct 2, 2022
Belgium	7731	Jan 5, 2022	Oct 2, 2022
Turkey	936	Jan 5, 2022	Oct 2, 2022
Peru	272	Jan 5, 2022	Oct 2, 2022
Chile	408	Jan 5, 2022	Oct 2, 2022
Thailand	1157	Jan 5, 2022	Oct 2, 2022
Total	230,821		

Table S2: Mutations in the binding sites of primers and probe.

Primer	Lineage	Country	Mutation in primer	Mutation in 3' end	Number sequences	Frequency (Total 230,821)
S2F	BA.1.1.7	India	18	5	1	0.0004%
	Unassigned	India	5	5	1	0.0004%
	B.1.1	Turkey	4	4	1	0.0004%
	B.1.1	Turkey	3	3	1	0.0004%
	BA.1	Turkey	3	2	1	0.0004%
	B.1.1	Turkey	2	2	1	0.0004%
	BA.5.3.2	Germany	4	1	1	0.0004%
			1	1	65	0.0282%
			5	0	6	0.0026%
			3	0	1	0.0004%
			2	0	1	0.0004%
			1	0	250	0.1083%
	Total				330	0.1430%
S2R	Unassigned	USA	4	4	1	0.0004%
	B.1.1.529	USA	4	3	1	0.0004%
	BA.2	Turkey	3	3	1	0.0004%
	BA.1	Turkey	3	1	1	0.0004%
			1	1	171	0.0741%
			5	0	7	0.0030%
			4	0	1	0.0004%
			3	0	3	0.0013%
			2	0	2	0.0009%
			1	0	179	0.0775%
	Total				367	0.1590%
S2Pr	BA.1	Turkey	4	4	1	0.0004%
	BE.1	Turkey	3	3	1	0.0004%
	BA.2.12.1	USA	3	3	1	0.0004%
	BA.1	USA	2	2	1	0.0004%
			1	1	44	0.0191%
			2	0	5	0.0022%
			1	0	1085	0.4701%
	Total				1138	0.4930%

