

Table S1. Strain names and accession numbers of eight segments of influenza A(H3N2) and B/Victoria viruses collected in Myanmar in 2021, sequenced during this study, and deposited in GISAID.

Strain name	ID	PB2	PB1	PA	HA	NP	NA	MP	NS
A/Myanmar/21M003/2021	EPI_ISL_13614323	EPI2082798	EPI2082799	EPI2082800	EPI2082801	EPI2082802	EPI2082803	EPI2082804	EPI2082805
A/Myanmar/21M004/2021	EPI_ISL_13614361	EPI2082806	EPI2082807	EPI2082808	EPI2082809	EPI2082810	EPI2082811	EPI2082812	EPI2082813
A/Myanmar/21M007/2021	EPI_ISL_13631518	EPI2082943	EPI2082944	EPI2082945	EPI2082946	EPI2082947	EPI2082948	EPI2082949	EPI2082950
A/Myanmar/21M008/2021	EPI_ISL_13631519	EPI2082951	EPI2082952	EPI2082953	EPI2082954	EPI2082955	EPI2082956	EPI2082957	EPI2082958
A/Myanmar/21M009/2021	EPI_ISL_13631520	EPI2082959	EPI2082960	failed	EPI2082961	EPI2082962	EPI2082963	EPI2082964	EPI2082965
A/Myanmar/21M013/2021	EPI_ISL_13631521	EPI2082966	EPI2082967	EPI2082968	EPI2082969	EPI2082970	EPI2082971	EPI2082972	EPI2082973
A/Myanmar/21M014/2021	EPI_ISL_13631522	EPI2082974	EPI2082975	EPI2082976	EPI2082977	EPI2082978	EPI2082979	EPI2082980	EPI2082981
A/Myanmar/21M017/2021	EPI_ISL_13631686	EPI2082982	EPI2082983	EPI2082984	EPI2082985	EPI2082986	EPI2082987	EPI2082988	EPI2082989
A/Myanmar/21M022/2021	EPI_ISL_13631687	EPI2082990	EPI2082991	EPI2082992	EPI2082993	EPI2082994	EPI2082995	EPI2082996	EPI2082997
A/Myanmar/21M073/2021	EPI_ISL_13631776	EPI2082998	EPI2082999	EPI2083000	EPI2083001	EPI2083002	EPI2083003	EPI2083004	EPI2083005
A/Myanmar/21M142/2021	EPI_ISL_13631777	EPI2083006	EPI2083007	EPI2083008	EPI2083009	EPI2083010	EPI2083011	EPI2083012	EPI2083013
A/Myanmar/21M143/2021	EPI_ISL_13631778	EPI2083014	EPI2083015	EPI2083016	EPI2083017	EPI2083018	EPI2083019	EPI2083020	EPI2083021
A/Myanmar/21M144/2021	EPI_ISL_13631779	EPI2083022	EPI2083023	EPI2083024	EPI2083025	EPI2083026	EPI2083027	EPI2083028	EPI2083029
B/Myanmar/21M015/2021	EPI_ISL_13631828	EPI2083031	EPI2083032	EPI2083030	EPI2083033	EPI2083034	EPI2083035	EPI2083036	EPI2083037
B/Myanmar/21M023/2021	EPI_ISL_13631829	EPI2083038	EPI2083039	EPI2083040	EPI2083041	EPI2083042	EPI2083043	EPI2083044	EPI2083045
B/Myanmar/21M024/2021	EPI_ISL_13632067	failed	failed	failed	EPI2083046	EPI2083047	EPI2083048	EPI2083049	EPI2083050

Abbreviations: PB2, polymerase basic 2; PB1, polymerase basic 1; PA, polymerase acid; HA, hemagglutinin; NP, nucleocapsid protein; NA, neuraminidase; MP, matrix protein; NS, nonstructural protein.

Table S2. Common amino acid substitutions in seven segments of A(H3N2) viruses collected in Myanmar 2021 and compared with those of the SH 2021 vaccine strains A/Hong Kong/45/2019.

Amino acid substitutions																					
	Segment	PB2							PB1							PA			NP		
Vaccine strain	Clade	112	415	449	314	400	561	571	587	603	618	619	692	321	402	626	136	220	418	500	
A/Hong Kong/45/2019	3C.2a.1b.1b	N	M	I	S	A	D	R	G	G	M	R	S	Y	S	R	I	E	L	G	
Myanmar viruses 2021	2a.3	D	V	V	N	E	G	Q	R	E	T	I	N	C	T	K	M	D	I	E	
	Segment	NA							MP							NS					
Vaccine strain	Clade	45	54	315	329	344	346	463	465	271	285	298	299	135	211	218	241				
A/Hong Kong/45/2019	3C.2a.1b.1b	L	E	S	S	E	G	D	N	V	P	S	T	R	N	P	N				
Myanmar viruses 2021	2a.3	P	G	R	N	K	D	N	S	M	L	C	A	K	H	L	D				

Abbreviations: SH, Southern Hemisphere; PB2, polymerase basic 2; PB1, polymerase basic 1; PA, polymerase acid; NP, nucleoprotein; NA, neuraminidase; MP, matrix protein; NS, nonstructural protein.

Table S3. Common amino acid substitutions in seven segments of A(H3N2) viruses collected in Myanmar 2021 and compared with those of the SH 2022 vaccine strains A/Darwin/6/2021.

		Amino acid substitutions												
	Segment	PB1					PA			NA			MP	
Vaccine strain	Clade	376	583	619	99	321	402	407	660	54	329	288	298	325
A/Darwin/6/2021	2a	T	R	T	E	Y	A	V	S	E	S	H	T	V
Myanmar viruses 2021	2a.3	A	K	I	G	C	T	I	A	G	N	P	A	I

Abbreviations: SH, Southern Hemisphere; PB2, polymerase basic 2; PB1, polymerase basic 1; PA, polymerase acid; NP, nucleoprotein; NA, neuraminidase; MP, matrix protein; NS, nonstructural protein.

Table S4. Common amino acid substitutions in seven segments of B/Victoria viruses collected in Myanmar 2021 and compared with those of the SH 2021 vaccine strains B/Washington/02/2019.

Amino acid substitutions																				
	Segment	PB2	PB1				PA			NP				NA						
Vaccine strain	Clade	56	375	454	272	312	613	709	549	550	551	42	71	344	345	396	402	465	470	484
B/Washington/02/2019	V1A.3	S	S	N	H	K	K	F	R	D	T	P	V	Q	R	N	G	H	E	V
Myanmar viruses 2021	V1A.3a.2	N	G	D	Y	R	R	V	G	S	R	Q	A	R	G	S	D	Y	G	I
	Segment	MP					NS													
Vaccine strain	Clade	15	285	306	362	378	130	306	311	312										
B/Washington/02/2019	V1A.3	T	I	D	F	V	L	N	L	H										
Myanmar viruses 2021	V1A.3a.2	I	T	G	S	A	F	S	P	N										

Abbreviations: SH, Southern Hemisphere; PB2, polymerase basic 2; PB1, polymerase basic 1; PA, polymerase acid; NP, nucleoprotein; NA, neuraminidase; MP, matrix protein; NS, nonstructural protein.

Table S5. Common amino acid substitutions in seven segments of B/Victoria viruses collected in Myanmar 2021 and compared with those of the SH 2022 vaccine strains B/Austria/1359417/2021.

Amino acid substitutions													
	Segment	PB2	PB1			PA			NP		NA		NS
Vaccine strain	Clade	396	51	375	272	376	613	28	550	551	455	460	312
B/Austria/1359417/2021	V1A.3a.2	I	D	S	H	I	K	A	D	T	V	Y	H
Myanmar viruses 2021	V1A.3a.2	M	N	G	Y	M	R	T	S	R	A	C	N

Abbreviations: SH, Southern Hemisphere; PB2, polymerase basic 2; PB1, polymerase basic 1; PA, polymerase acid; NP, nucleoprotein; NA, neuraminidase; MP, matrix protein; NS, nonstructural protein.