S7 Table. Amino acid substitutions found on the NA protein for all Malaysian Victoria Clade 1 viruses (n=68).

Amino Acid Position	7	8	15	21	35	36	42	43	44	45	53	54	55	63	65	69	70	72	73	81	95	107	120	129	142	145	151	230	246	249	273	295	340	342	343	345	348	358	360	384	389	390	392	395	417	427	432	452	463
N2 Numbering System	11	12	19	25			42		43	44	52	53	54	62	64	68	69	71	72		100		122	131	144	147	153	231	247	250	274	295	340	341	342	344	349			382	385	386	388	391	415	425	430	455	466
B/Brisbane/60/2008_2008-08-04	Q	T	S	S	D	I	P	T	E	I	D	C	A	V	R	K	G	T	L	T	A	K	I	H	Y	G	N	N	S	S	H	S	N	D	K	S	I	E	K	D	A	D	D	A	D	I	D	G	D
394362_B/MALAYSIA/210/2012_2012-01-03																									H	R							D							T									
379598_B/MALAYSIA/212/2012_2012-01-05																														N			D							T				N				
379538_B/MALAYSIA/221/2012_2012-01-12																																	D							T						G		
394364_B/MALAYSIA/283/2012_2012-01-15																																	D					E		T								
379547_B/MALAYSIA/269/2012_2012-02-21	P	M																										S					D							T								
B/Malaysia/U33/2012_2012-02-29																																	D							T								
379550_B/MALAYSIA/346/2012_2012-03-01																	E																D							T								
B/Malaysia/U132/2012_2012-03-16																																	D							T								
B/Malaysia/U138/2012_2012-03-16																																	D							T								
B/Malaysia/U144/2012_2012-03-19																																	D							T						E		
B/Malaysia/U162/2012_2012-03-21																																	D							T								
B/Malaysia/U185/2012_2012-03-26																																	D							T								
B/Malaysia/U255/2012_2012-04-06																																	D							T		G						
B/Malaysia/U260/2012_2012-04-06																																	D							T								
B/Malaysia/U346/2012_2012-04-20																								Y									D							T				T				
B/Malaysia/U352/2012_2012-04-23																																	D							T								
B/Malaysia/U406/2012_2012-04-30																																	D							T	N							
B/Malaysia/U428/2012_2012-05-02							T																										D							T								
B/Malaysia/U439/2012_2012-05-04																																	D							T								
B/Malaysia/U440/2012_2012-05-04																																	D							T								
B/Malaysia/U488/2012_2012-05-11				L																													D							T								
B/Malaysia/U1250/2012_2012-10-04																																	D							T								
B/Malaysia/U1531/2012_2012-11-23														L																			D							T								
B/Malaysia/U82/2012_2012-03-09																		I	I				V										D																N
B/Malaysia/U83/2012_2012-03-09																																R	D					K										
B/Malaysia/U85/2012_2012-03-09																																R	D					K										
B/Malaysia/U166/2012_2012-03-21																																R	D					K										
B/Malaysia/U227/2012_2012-03-31			L																F									T			R	D					K										
B/Malaysia/U355/2012_2012-04-23																																R	D					K										
B/Malaysia/U498/2012_2012-05-14																																R	D					K										
B/Malaysia/U917/2012_2012-07-23									K		G																					R	D					K										
B/Malaysia/U1277/2012_2012-10-08							M												F													R	D					K										
B/Malaysia/U1429/2012_2012-11-09																																R	D					K										
B/Malaysia/U1593/2012_2012-12-03							M												F													R	D					K										
B/Malaysia/U1846/2013_2013-01-14																																R	D					K										
B/Malaysia/U1876/2013_2013-01-21												Y																				R	D		E			K										
B/Malaysia/U2057/2013_2013-02-27																																R	D					K										
466150_B/MALAYSIA/18/2013_2013-03-31																																R	D					K										
466152_B/MALAYSIA/19/2013_2013-03-31					G											E														Y	R	D					K					T					
466155_B/MALAYSIA/20/2013_2013-03-31					G											E														Y	R	D					K					T					
B/Malaysia/U2343/2013_2013-04-26									M					C																	R	D			N		K							V			
B/Malaysia/U2542/2013_2013-06-24																																R	D					K										
B/Malaysia/U1710/2012_2012-12-26																						N										R	D					K										
B/Malaysia/U2299/2013_2013-04-17																																R	D				V	K						V			
B/Malaysia/U2782/2013_2013-09-11							S																									R	D				V	K									
541284_B/MALAYSIA/6/2014_2014-02-20												Y			H																	R	D				V	K									
541303_B/MALAYSIA/2/2014_2014-01-30																			F								T					R	D		E			K									
B/Malaysia/U3510/2014_2014-02-14																																R	D	N	E			K										N
B/Malaysia/U3527/2014_2014-02-17																																R	D	N	E			K										N
B/Malaysia/U1267/2012_2012-10-08																						N										R	D		E			K										
B/Malaysia/U1331/2012_2012-10-17																						N										R	D		E			K										
B/Malaysia/U1827/2013_2013-01-11																						N										R	D		E			K										
B/Malaysia/U1889/2013_2013-01-23																						N										R	D		E			K										
B/Malaysia/U1890/2013_2013-01-23																						N										R	D		E			K										
B/Malaysia/U1996/2013_2013-02-20																						N										R	D		E			K										
B/Malaysia/U2230/2013_2013-04-01																						N										R	D		E			K		G								
B/Malaysia/U2305/2013_2013-04-17											N											N										R	D		E			K										
529379_B/MALAYSIA/26/2013_2013-09-05																						N										R	D		E			K			V							
B/Malaysia/U3331/2014_2014-01-06																						N										R	D		E			K			V							
B/Malaysia/U3503/2014_2014-02-12																				I		N										R	D		E			K										
B/Malaysia/U3587/2014_2014-03-03																						N										R	D		E			K										
B/Malaysia/U199/2012_2012-03-28								K																								R	D					K										
B/Malaysia/U252/2012_2012-04-04								K																								R	D					K										
B/Malaysia/U465/2012_2012-05-09								K																								R	D					K										
B/Malaysia/U837/2012_2012-07-11								K					V																			R	D					K										
B/Malaysia/U38/2012_2012-02-29									K												V											R	D					K										
B/Malaysia/U173/2012_2012-03-23									K																							R	D					K										
B/Malaysia/U188/2012_2012-03-26									K																							R	D					K										

Grey highlight indicates major clade-defining amino acid substitutions. Substitutions are compared with B/Brisbane/60/2008 vaccine strain.