

Table 4 The novel identified amino acid mutations of the *cap* protein compared with the PiCV reference strains.

Position	The 90 identified PiCV strains	The Chinese PiCV reference strains	The PiCV reference strains from other countries
6	F ⁶ I/S/V	F ⁶ L/V	F ⁶ L/S/Y
11	R ¹¹ G	R	R ¹¹ K/T
12	A ¹² P	A	A ¹² G
19	I ¹⁹ F/V/Y	I ¹⁹ V	I ¹⁹ G/Y
20	R ²⁰ K	R	R ²⁰ G
27	S ²⁷ I/R/Y	S ²⁷ A/R/T/Y	S ²⁷ R/Y
31	R ³¹ P	R	R
32	G ³² A/R/S	G	G ³² P/R/S/V
37	S ³⁷ G/N/R	S ³⁷ G/N	S ³⁷ A/D/G/N
48	D ⁴⁸ E/G	D	D ⁴⁸ E
106	D ¹⁰⁶ E/N/P/S	D ¹⁰⁶ E/N/P	D ¹⁰⁶ E/N/P/Q
108	T ¹⁰⁸ M/L	T ¹⁰⁸ M	T ¹⁰⁸ M
117	V ¹¹⁷ C/A	V ¹¹⁷ C	V ¹¹⁷ C
146	K ¹⁴⁶ R	K	K
179	F ¹⁷⁹ L	F	F
191	V ¹⁹¹ L/P/T	V ¹⁹¹ T	V ¹⁹¹ I/L/M/T
203	H ²⁰³ F/Q/Y	H ²⁰³ Y	H ²⁰³ F/Y
216	D ²¹⁶ A	D	D ²¹⁶ E/N/T
231	R ²³¹ S	R	R
237	T ²³⁷ A/S	T ²³⁷ A	T ²³⁷ A
247	E ²⁴⁷ D/Q	E ²⁴⁷ Q	E ²⁴⁷ G/Q
257	G ²⁵⁷ D	G	G
258	D ²⁵⁸ G/N/Q	D ²⁵⁸ N	D ²⁵⁸ N

260	N ²⁶⁰ A /M/P	N ²⁶⁰ P	N ²⁶⁰ D/M/P
262	C ²⁶² F	C	C
264	A ²⁶⁴ T	A	A
275	D ²⁷⁵ E/ F /L	D ²⁷⁵ E/L	D ²⁷⁵ E/L
276	S ²⁷⁶ G /I/N	S ²⁷⁶ C/I/T	S ²⁷⁶ C/I/R/T/Y

Note. The novel identified amino acid mutations are in bold font. The GenBank accession no. of the 90 identified PiCV strains, the Chinese PiCV reference strains and PiCV reference strains from other countries was shown in Table 2, S1 and S2.

Abbreviations: aa, amino acid.