

Supplementary Table 8. Amino acid residues and substitutions in the NS2 gene of the recent CPV strains (2023), repository isolates (2009 - 2019), CPV vaccine strain and the reference strains from NCBI GenBank.

	NCBI GenBank Accession ID	Sample ID	State	Place	Country	Year	Amino acid position at NS2 gene							Strain	
							19	60	92	93	94	108	110	163	
CPV Vaccine	OR296289	Indian Vaccine strain					Lys	Ile	Lys	Asp	Thr	Ser	Asp	Leu	CPV-2
Reference strains from NCBI GenBank	MK895490				Nigeria	2018	.	Val	Arg	.	.	.	.	.	CPV-2c
	MK895486				Nigeria	2018	.	Val	Arg	.	.	.	.	Phe	CPV-2c
	MH476587				China	2017	.	Val	Arg	.	.	.	.	.	CPV-2c
	MG013488				China	2017	.	Val	Arg	.	.	.	.	.	CPV-2c
	ON322787				China	2020	.	Val	Arg	.	.	Phe	.	.	CPV-2c
	OQ092740		Mizoram		India	2022	.	Val	Arg	.	.	.	.	.	CPV-2c
Repository isolates (2009 - 2019)	OR296278	3566	Puducherry	Puducherry	India	2009	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296281	CO2	Coimbatore	Tamil Nadu	India	2011	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296280	S4	Salem	Tamil Nadu	India	2012	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296279	MY05	Mysore	Karnatka	India	2012	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296282	TH10	Trivandrum	Kerala	India	2012	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296283	TRI6	Thrissur	Kerala	India	2012	Arg	.	.	.	.	.	.	.	CPV-2a
	OR296284	UP6	Mathura	Uttar Pradesh	India	2014	Arg	.	.	.	.	.	Asn	.	CPV-2a
	OR296285	KLD3	Thrissur	Kerala	India	2014	Arg	.	.	.	.	.	.	.	CPV-2a
	OR296288	SD02	Gangtok	Sikkim	India	2014	Arg	.	.	.	.	.	.	.	CPV-2a
	OR296286	QLN11	Chennai	Tamil Nadu	India	2019	Arg	.	.	.	.	.	.	.	CPV-2a
	OR296287	WV14	Goa	Goa	India	2019	.	.	.	.	.	.	.	.	CPV-2a
Recent CPV strains (2023)	OR296260	J01	Delhi	Delhi	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296261	M01	Mumbai	Maharashtra	India	2023	.	.	Arg	.	.	.	.	.	CPV-2c
	OR296262	N02	Pfutsero	Nagaland	India	2023	.	Val	.	.	.	.	.	.	CPV-2c
	OR296263	124644	Chennai	Tamil Nadu	India	2023	.	.	Arg	.	.	.	.	.	CPV-2c
	OR296264	HYD05	Hyderabad	Telangana	India	2023	.	.	Arg	Glu	Ala	.	.	.	CPV-2c
	OR296265	3157	Puducherry	Puducherry	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296266	MJ02	Jabalpur	Madhya Pradesh	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296267	15024	Bhopal	Madhya Pradesh	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296268	B03	Patna	Bihar	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296269	Chhat01	Durg	Chhattisgarh	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296270	JH04	Ranchi	Jharkhand	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296271	HY01	Faridabad	Haryana	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296272	UP02	Ayodhya	Uttar Pradesh	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
	OR296273	WB02	Kolkata	West Bengal	India	2023	Arg	.	.	.	Ala	.	.	.	CPV-2c

OR296274	AS03	Guwahati	Assam	India	2023	.	Val	Arg	.	.	.	.	.	CPV-2c
OR296275	01G	Goa	Goa	India	2023	.	.	Arg	Glu	Ala	.	.	.	CPV-2c
OR296276	03R	Jaipur	Rajasthan	India	2023	.	Val	Arg	Glu	Ala	.	.	.	CPV-2c
OR296277	MZ04	Aizwal	Mizoram	India	2023	.	Val	.	.	.	.	.	.	CPV-2c
