

Supplementary Table 4. Amino acid residues and substitutions in the VP1 gene (N-terminus) of the recent CPV strains (2023), repository isolates (2009 - 2019), Indian CPV vaccine strain and the reference strains from NCBI GenBank.

	NCBI GenBank Accession ID	Sample ID	Place	State	Country	Year	Amino acid position at the CPV VP1 gene (N-terminus)																
							25	30	37	43	44	45	47	64	82	83	84	87	95	116	120	131	136
Vaccine	OR296289	Indian CPV Vaccine strain					Ser	Glu	Ala	Asp	Glu	Ala	Ala	Asp	Gly	Leu	Tyr	Arg	Leu	Lys	His	Ala	Val
Reference Strains from NCBI GenBank	M38245				USA	1978	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	M24003				USA	1988	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	JQ686671				China	2012	.	.	.	.	.	.	.	.	.	His	.	.	Val	Arg	.	.	.
	KF638400				China	2014	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	EF011664				China	2009	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	JQ268283				China	2011	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	AB437433				Japan	2008	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	AY742935				USA	2011	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	AY742936				USA	2005	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	KF676668				China	2013	.	.	.	.	.	.	.	.	.	His	.	.	Val	Arg	.	.	.
	EU659121				USA	2008	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	DQ340431				Brazil	2011	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	MK895490				Nigeria	2018	.	.	.	.	.	.	.	.	.	His	.	.	Val	Arg	.	.	.
	MK895486				Nigeria	2018	.	.	.	.	.	.	.	.	.	His	.	.	Val	Arg	.	.	.
	MH476587				China	2017	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	MG013488				China	2017	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	ON322787				China	2020	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	Thr	.
	OQ092740		Aizwal	Mizoram	India	2022	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	Thr	Ala
Repository isolates (2009 - 2019)	OR296278	3566	Puducherry	Puducherry	India	2009	Ile	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296281	CO2	Coimbatore	Tamil Nadu	India	2011	.	.	.	.	.	.	.	.	Glu	.	.	.	.	.	.	.	.
	OR296280	S4	Salem	Tamil Nadu	India	2012	.	.	.	.	.	.	.	.	.	.	.	.	Val	.	.	.	.
	OR296282	TH10	Trivandrum	Kerala	India	2012	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296279	MY05	Mysore	karnataka	India	2012	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296283	TRI6	Thrissur	Kerala	India	2012	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296284	UP6	Mathura	Uttar Pradesh	India	2014	.	.	.	.	.	.	.	.	.	.	.	.	Val	.	.	.	.

Recent CPV strains (2023)	OR296285	KLD3	Thrissur	Kerala	India	2014	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296288	SD02	Gangtok	Sikkim	India	2014	.	.	.	.	.	.	.	.	.	.	.	.	Val	.	.	.	.
	OR296287	QLN11	Goa	Goa	India	2019	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296286	WV14	Chennai	Tamil Nadu	India	2019	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296260	J01	Delhi	Delhi	India	2023	Ile	Lys	.	Asn	Lys	Ser	Pro	Asn	.	His	.	Lys	Val	.	.	.	.
	OR296261	M01	Mumbai	Maharashtra	India	2023	Ile	.	.	.	Lys	Ser	Pro	.	.	His	.	Lys	Val	.	.	.	.
	OR296262	N02	Pfutsero	Nagaland	India	2023	.	.	.	.	.	.	.	.	.	His	.	Lys	Val	.	.	.	.
	OR296263	124644	Chennai	Tamil Nadu	India	2023	Ile	Lys	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296264	HYD05	Hyderabad	Telngana	India	2023	Ile	.	.	.	.	.	.	.	.	His	Phe	.	.	Thr	Leu	.	.
	OR296265	3157	Puducherry	Puducherry	India	2023	.	.	.	.	.	.	.	.	.	His	.	.	Ala	.	.	.	.
	OR296266	MJ02	Jabalpur	Madhya Pradesh	India	2023	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296267	15024	Bhopal	Madhya Pradesh	India	2023	.	Lys	Pro	Asn	Lys	Ser	.	.	.	His	.	.	Ala	.	.	.	.
	OR296268	B03	Patna	Bihar	India	2023	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	OR296269	Chhat01	Durg	Chhattisgarh	India	2023	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	OR296270	JH04	Ranchi	Jharkhand	India	2023	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	OR296271	HY01	Faridabad	Haryana	India	2023	.	.	.	.	.	.	.	.	.	His	.	Lys	Val	.	.	.	.
	OR296272	UP02	Ayodhya	Uttar Pradesh	India	2023	.	.	.	.	.	.	.	.	.	His	.	Lys	Val	.	.	.	.
	OR296273	WB02	Kolkata	West Bengal	India	2023	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	OR296274	AS03	Guwahati	Assam	India	2023	.	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	OR296275	01G	Goa	Goa	India	2023	Ile	.	.	.	.	.	.	.	.	His	.	.	Val	.	.	.	.
	OR296276	03R	Jaipur	Rajasthan	India	2023	Ile	.	.	.	.	.	.	.	.	His	Phe	.	.	Thr	Leu	.	.
	OR296277	MZ04	Aizwal	Mizoram	India	2023	Ile	.	.	.	.	.	.	.	.	His	Phe	.	.	Thr	Leu	.	.