

Influenza A(H1N1)pdm09 egg-derived¹ candidate vaccine viruses for the development and production of vaccines for use in the 2024 southern hemisphere influenza season

Antigenic and genetic analyses are performed by the WHO Collaborating Centres of the Global Influenza Surveillance and Response System (GISRS). Unless otherwise specified, all candidate vaccine viruses posted on this table have passed two-way haemagglutination inhibition (HI) test. [National or Regional control authorities approve the composition and formulation of vaccines used in each country](#)²

29 September 2023 (Last updated 12 February 2024)

Candidate vaccine viruses (CVVs) antigenically like A/Victoria/4897/2022 (egg-derived) - Accession number (GISAID): EPI_ISL_16714268

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Victoria/4897/2022	Wild type virus			WHO CCs MHRA, UK
	IVR-238	Classical	Seqirus	CCDC, China MHRA, UK NIID, Japan VIDRL, Australia
A/West Virginia/30/2022	Wild type virus			CDC, USA MHRA, UK
	IVR-239	Classical	Seqirus	NIID, Japan VIDRL, Australia
	X-393	Classical	NYMC	MHRA, UK NYMC, USA
	X-393A	Classical	NYMC	MHRA, UK NYMC, USA
A/Wisconsin/67/2022	Wild type virus			CDC, USA MHRA, UK
	X-397	Classical	NYMC	CDC, USA
A/Norway/31694/2022	Wild type virus			FCI, UK MHRA, UK
	NIB-133	Classical	MHRA	MHRA, UK
A/Catalonia/NSVH161512065/2022	Wild type virus			FCI, UK
	NIB-134	Classical	MHRA	MHRA, UK
A/Sichuan-Qingyang/SWL1148/2023	Wild type virus			WHO CCs
	CNIC-2301	Classical	CNIC	WHO CCs CBER/FDA, USA MHRA, UK

Institutes contact details for candidate vaccine viruses orders/information:

CCDC: whocc-china@cnic.org.cn

¹ For cell-derived candidate vaccine viruses and reference reagents please see <https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations/candidate-vaccine-viruses>

² <https://www.who.int/initiatives/who-listed-authority-reg-authorities>

CDC: pdx1@cdc.gov (Subject: CVV request)
FCI: whocc@crick.ac.uk
MHRA: standards@nibsc.org or enquiries@nibsc.org
NIID: flu-vaccine@nih.go.jp
NYMC: doris_bucher@nymc.edu
VIDRL: whoflu@influenzacentre.org
WHO CCs and ERLs: http://www.who.int/influenza/gisrs_laboratory/collaborating_centres

Reference antigens (freeze dried)

Parent virus	Starting materials		Ref Ag lot number	Unitage (µg HA/ml)	Available from
	Candidate vaccine virus	Egg or cell			
A/Victoria/4897/2022	IVR-238	Egg	H1-Ag-2303	60	CBER/FDA, USA
			2023/143B	99	TGA, Australia
			2023/146B*	96	
			22/320	72	MHRA, UK
			2023AH1A	66	NIID, Japan
			2023AH1B	61	

*New reagents shown in blue

Sheep antisera

Purified HA from		Order lot number	Available from
Parent virus	Egg or cell		
A/Victoria/4897/2022-like	Egg	AS451-1	TGA, Australia
		AS454	
		23/100	MHRA, UK
		2023AH1-1	NIID, Japan
		H1-Ab-2316	CBER/FDA, USA
A/Sydney/5/2021		H1-Ab-2214 [†]	

[†]This antiserum should be used with CBER reference antigens only

ERLs contact details for reagents orders/information:

CBER: CBERshippingrequests@fda.hhs.gov
MHRA: standards@nibsc.org or enquiries@nibsc.org
NIID: flu-vaccine@nih.go.jp
TGA: influenza.reagents@health.gov.au

For other candidate vaccine viruses and potency testing reagents, please go to <https://www.who.int/teams/global-influenza-programme/vaccines/who-recommendations/candidate-vaccine-viruses>

For general enquiries, please contact gisrs-whohq@who.int