

Influenza A(H3N2) egg-derived¹ candidate vaccine viruses for development and production of vaccines for use in the 2024-2025 northern 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

23 February 2024 (Last updated 12 July 2024)

Candidate vaccine viruses antigenically like A/Thailand/8/2022 (egg-derived) – Accession number (GISAID): EPI_ISL_16014504

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Thailand/8/2022	Wild type virus			WHO CCs
	IVR-237	Classical	Seqirus	CCDC, China NIID, Japan VIDRL, Australia
A/California/122/2022	Wild type virus			CDC, USA MHRA, UK
	SAN-022	Classical	Sanofi	NIID, Japan Sanofi, USA
	CBER-54A	Classical	CBER	CBER/FDA, USA
A/Brisbane/837/2022	Wild type virus			VIDRL, Australia
	IVR-246	Classical	Seqirus	NIID, Japan VIDRL, Australia
A/Brandenburg/15/2022	Wild type virus			FCI, UK MHRA, UK
A/Sichuan-Gaoxin/1144/2023	Wild type virus			WHO CCs MHRA, UK
	CNIC-2302D	Classical	CCDC	WHO CCs MHRA, UK
A/Sichuan-Jianyang/35/2023	Wild type virus			WHO CCs MHRA, UK
	CNIC-2303A	Classical	CCDC	WHO CCs MHRA, UK
	CNIC-2303C			WHO CCs MHRA, UK
A/California/45/2023	Wild type virus			CDC, USA
	X-417*	classical	NYMC	NYMC, USA

*New CVV shown in blue

Institutes contact details for candidate vaccine virus orders/information:

CBER: CBERshippingrequests@fda.hhs.gov

CCDC: whocc-china@cnic.org.cn

CDC: pdx1@cdc.gov (Subject: CVV request)

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>

FCI: whocc@crick.ac.uk
MHRA: standards@nibsc.org or enquiries@nibsc.org
NIID: flu-vaccine@nih.go.jp
NYMC: andrew_fulvini@nymc.edu
Sanofi: raymond.schwartz@sanofi.com
VIDRL: whoflu@influenzacentre.org

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/Thailand/8/2022	IVR-237	Egg	2023/145B	103	TGA, Australia
			23/220	58	MHRA, UK
A/California/122/2022	SAN-022		H3-Ag-2314	65	CBER/FDA, USA
			23/226	70	MHRA, UK
			24/106	47	

Sheep Antisera

Purified HA from		Order Lot number	Available from
Parent virus	Egg or cell		
A/Thailand/8/2022 - like	Egg	H3-Ab-2315	CBER/FDA, USA
		H3-Ab-2401	
		23/222	MHRA, UK
		AS450	TGA, Australia

The above-listed potency testing reagents are developed with support from manufacturers and calibrated by the WHO Essential Regulatory Laboratories (ERLs) of the Global Influenza Surveillance and Response System (GISRS).

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