

Summary of status of development and availability of A(H5) non-A(H5N1) candidate vaccine viruses and potency testing reagents

Antigenic and genetic analyses are performed by the WHO Collaborating Centres of the Global Influenza Surveillance and Response System (GISRS). Unless otherwise indicated 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](#)

3 October 2023 (Last updated 25 January 2024)

Candidate vaccine viruses*

Subtype	Antigenic prototype	Clade	Candidate vaccine virus	Developing institute	Available from
H5N6	A/duck/Hyogo/1/2016	2.3.4.4e	Wild type virus		WHO CCs
			NIID-001*	NIID, Japan	NIID, Japan
	A/Sichuan/26221/2014	2.3.4.4a	Wild type virus		WHO CCs
			IDCDC-RG42A*	CCDC, China CDC, USA	CDC, USA
H5N8	A/gyrfalcon/Washington/41088-6/2014	2.3.4.4c	Wild type virus		WHO CCs
			IDCDC-RG43A*	CDC, USA	CDC, USA
	A/Astrakhan/3212/2020	2.3.4.4b	IDCDC-RG71A*	CDC, USA	CDC, USA
			CBER-RG8A*	CBER/FDA, USA	CBER/FDA, USA
H5N6	A/Guangdong/18SF020/2018-like	2.3.4.4h	Wild type virus		WHO CCs
			IDCDC-RG65A*	CDC, USA	CDC, USA
H5N6	A/chicken/Vietnam/RAHO4-CD-20-421/2020-like	2.3.4.4g	Wild type virus		CDC, USA
			IDCDC-RG69A*	CDC, USA	CDC, USA

*These viruses are candidate vaccine viruses which have passed relevant safety testing. They can be handled under BSL-2 enhanced containment¹.

¹ [Guidelines for the safe development and production of vaccines to human pandemic influenza viruses and influenza viruses with pandemic potential, Annex 3, TRS No 1016 \(who.int\)](#)

Candidate vaccine viruses in preparation

Subtype	Antigenic prototype	Clade	Developing Institute	Available from
H5N6	A/chicken/Viet Nam/NCVD-15A59/2015-like	2.3.4.4f	SJCRH, USA	Pending
H5N6	A/Guangdong/18SF020/2018-like	2.3.4.4h	CCDC, China HKU, China	Pending
H5N6	A/Hubei/29578/2016-like	2.3.4.4d	CCDC, China	Pending
H5N6	A/Fujian-Sanyuan/21099/2017-like	2.3.4.4b	CCDC, China	Pending

Institutes contact details for candidate vaccine virus orders and other information:

CBER: CBERshippingrequests@fda.hhs.gov

CCDC: dayanwang@cnic.org.cn

CDC: nmb7@cdc.gov (Subject: CVV Request)

NIID: flu-vaccine@nih.go.jp

SJCRH: richard.webby@stjude.org

HKU: malik@hkucc.hku.hk

WHO CCs: <https://www.who.int/initiatives/global-influenza-surveillance-and-response-system/who-collaboration-center-erl?CxitPEOtTWx0xUd5TJdODSXcnyJqzYd7FZeivpn7xcl=>

Candidate vaccine viruses and potency testing reagents for influenza A(H5N1) can be found on the WHO web site at http://www.who.int/influenza/vaccines/virus/candidates_reagents/a_h5n1/en/

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

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

Reference antigens (freeze dried)

Subtype	Starting materials		Ref Ag Lot number	Unitage (µgHA/ml)	Available from
	Parent virus	CVV			
H5N6	A/Sichuan/26221/2014	IDCDC-RG42A	H5-Ag-2111 (cell)	60	CBER/FDA, USA
H5N8	A/gyrfalcon/Washington/41088-6/2014		H5-Ag-1514 (egg)	83	
			H5-Ag-1511 (cell)	87	
	A/Astrakhan/3212/2020	IDCDC-RG71A	H5-Ag-2301 (egg)	62	
		SeqHS-sYs22_09.5a	H5-Ag-2213 (cell)	98	
		CBER-RG8A	2023/144B (egg)	72	TGA, Australia

Sheep antisera

Subtype	Parent virus	Order Lot number	Available from
H5N6	A/Sichuan/26221/2014 rHA	H5-Ab-2201	CBER/FDA, USA
H5N8	A/gyrfalcon/Washington/41088-6/2014	H5-Ab-1515	
	A/Astrakhan/3212/2020	H5-Ab-2313*	

**New reagents shown in blue*

Institutes and contact details for candidate vaccine virus orders and other information:

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

CCDC: whocc-china@cnic.org.cn

MHRA: standards@nibsc.org or enquiries@nibsc.org

SJCRH: richard.webby@stjude.org

WHO CCs: <https://www.who.int/initiatives/global-influenza-surveillance-and-response-system/who-collaboration-center-erl?CxitPEOtTWx0xUd5TJdODSXcnyJqzYd7FZeivpn7xcl=>

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

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