

Influenza A(H3N2) egg-derived candidate vaccine viruses for development and production of vaccines for use in the 2019-20 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 indicated all candidate vaccine viruses posted on this table have passed two-way haemagglutination inhibition (HI) test. National or regional control authorities ¹ approve the composition and formulation of vaccines used in each country.

21 March 2019 (updated on 12 July 2019)

Candidate vaccine viruses (antigenically like A/Kansas/14/2017)

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Kansas/14/2017	Wild type virus			CCDC, China CDC, USA NIBSC, UK VIDRL, Australia NIID, Japan
	X-327	Classical	NYMC	NIBSC, UK NIID, Japan NYMC, USA
	X-327A	Classical	NYMC	NIBSC, UK NIID, Japan NYMC, USA
	IVR-195	Classical	Seqirus	NIBSC, UK NIID, Japan VIDRL, Australia
	CNIC-1903	Classical	CCDC	CCDC, China NIBSC, UK
	CBER-22C	Classical	CBER/FDA	CBER/FDA, USA
A/Beijing/2019-15554/2018	Wild type virus			WHO CCs WHO ERLs
	CNIC-1902	Classical	CCDC	CCDC, China NIBSC, UK

Institutes contact details for candidate vaccine virus orders/information:

CBER/FDA: Laura.Couzens@fda.hhs.gov
CCDC: whocc-china@cnic.org.cn
CDC: xxu@cdc.gov (Subject: CVV request)
FCI: whocc@crick.ac.uk
NIBSC: standards@nibsc.org or enquiries@nibsc.org
NIID: flu-vaccine@nih.go.jp
NYMC: doris_bucher@nymc.edu
VIDRL: whoflu@influenzacentre.org

¹ http://www.who.int/immunization_standards/national_regulatory_authorities%20offices/en/

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/Kansas/14/2017	X-327	Egg	2019/128B	82	TGA, Australia
			19/104	67	NIBSC, UK
			2019AH3A	52	NIID, Japan
			2019AH3B	57	NIID, Japan
	IVR-195		19/154	34	NIBSC, UK

Updated information shown in blue

Sheep Antisera

Purified HA from		Order Lot number	Available from
Parent virus	Egg or cell		
A/Kansas/14/2017	Egg	AS433	TGA, Australia
		19/152	NIBSC, UK

Updated information shown in blue

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:

NIBSC: 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 http://www.who.int/influenza/vaccines/virus/candidates_reagents/home/en/

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