

Influenza A(H1N1)pdm09 egg-derived candidate vaccine viruses for development and production of vaccines for use in the 2018-2019 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 approve the composition and formulation of vaccines used in each country](#)

22 February 2018

Candidate vaccine viruses (CVVs)¹Antigenically like A/Michigan/45/2015

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Singapore/GP1908/2015	Wild type virus			WHO CCs
	IVR-180	Classical	Seqirus, Australia	VIDRL, Australia FCI, UK NIBSC, UK CDC, USA NYMC, USA NIID, Japan
	IVR-180A	Classical	Seqirus, Australia	VIDRL, Australia
A/Slovenia/2903/2015	NIB-96	Classical	NIBSC, UK	NIBSC, UK
	NYMC X-291	Classical	NYMC, USA	NIBSC, UK NYMC, USA
	NYMC X-291A	Classical	NYMC, USA	NIBSC, UK NYMC, USA
A/Scotland/P2/2015	Wild type virus			WHO CCs
	NIB-97	Classical	NIBSC, UK	NIBSC, UK NIID, Japan
	NYMC X-285	Classical	NYMC, USA	NIBSC, UK NIID, Japan NYMC, USA

¹ Have passed two-way testing

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Scotland/P2/2015	NYMC X-285A	Classical	NYMC, USA	NIBSC, UK NYMC, USA
A/Lisboa/32/2015	Wild type virus			WHO CCs
	NIB-98	Classical	NIBSC, UK	NIBSC, UK NIID, Japan
	NYMC X-283A	Classical	NYMC, UK	NIBSC, UK
A/Michigan/45/2015	Wild type virus			WHO CCs
	NYMC X-275	Classical	NYMC, USA	NIBSC, UK NYMC, USA CDC, USA NIID, Japan
	NYMC X-275A	Classical	NYMC, USA	NIBSC, UK NYMC, USA CDC, USA NIID, Japan
A/Montana/50/2016	NYMC X-299	Classical	NYMC, USA	NIBSC, UK
A/Yunnan-Wuhua/SWL1938/2016	CNIC-1701	Classical	CCDC, China	NIBSC, UK CCDC, China

Institutes contact details for candidate vaccine viruses orders/information:

CDC: xxu@cdc.gov

CCDC: whocc-china@cnic.org.cn

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

WHO CCs: http://www.who.int/influenza/gisrs_laboratory/collaborating_centres/list/en/

Reference antigens (freeze dried)

Parent virus	Starting materials		Ref Ag Lot number	Unitage (µgHA/ml)	Available from
	Candidate vaccine virus	Egg or cell			
A/Michigan/45/2015	NYMC X-275	Egg	16/298	38	NIBSC, UK
			17/154	48	NIBSC, UK
A/Singapore/GP1908/2015	IVR-180	Egg	16/292	40	NIBSC, UK
			2016/112B	69	TGA, Australia
			2017/119B	70	TGA, Australia
			2017AH1A	54	NIID, Japan
			2017AH1B	54	
	IVR-180A	Egg	2017/11 8B	74	TGA, Australia
	Wild type virus	Cell	2016/114B	169	TGA, Australia

Sheep antisera

Purified HA from		Order Lot number	Available from
Parent virus	Egg or cell		
A/Michigan/45/2015	Egg	16/304, 17/106	NIBSC, UK
A/Singapore/GP1908/2015 (IVR-180)	Egg	AS418	TGA, Australia
		2017AH1-1	NIID, Japan

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