

Summary of status of development and availability of influenza B (Victoria and Yamagata lineages) 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).

[National or Regional control authorities approve the composition and formulation of vaccines used in each country](#)

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Candidate vaccine viruses

Unless otherwise indicated all candidate vaccine viruses posted on this table have passed two-way haemagglutination inhibition (HI) test.

Victoria lineage

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
B/Brisbane/33/2008	Wild type virus			NIBSC, UK
B/Brisbane/60/2008	Wild type virus			WHO CCs NIBSC, UK
	NIB-58	Classical	NIBSC, UK	NIBSC, UK
	NYMC BX-31 [#]		New York Medical College, (NYMC) USA	NYMC, USA NIBSC, UK
	NYMC BX-31B [#]			NYMC, USA
	NYMC BX-31-CL [#]			NYMC, USA CDC, USA
	NYMC BX-33 ^{##}			NYMC, USA CDC, USA
	NYMC BX-33B ^{##}			NYMC, USA NIID, Japan
	NYMC BX-35 ^{###}			NYMC, USA NIBSC, UK NIID, Japan
B/Bangladesh/5945/2009	NYMC BX-37 ^{##}			CDC, USA NYMC, USA

[#] B/Lee/40 backbone parent

^{##} B/Panama/45/90 backbone parent

^{###} B/Lee/40 and B/Panama/45/90 backbone parents

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
B/HongKong/259/2010	Wild type virus			CDC, USA
	NYMC BX-43 [#]	Classical	NYMC, USA	NYMC, USA
	NYMC BX-43A [#]	Classical	NYMC, USA	NYMC, USA
	NYMC BX-43B [#]	Classical	NYMC, USA	NYMC, USA
B/Nevada/3/2011	Wild type virus			CDC, USA
	NYMC BX-47 ^{##}	Classical	NYMC, USA	NYMC, USA CDC, USA

[#] B/Lee/40 backbone parent

^{##} B/Panama/45/90 backbone parent

Yamagata lineage

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
B/Hubei-Wujiagang/158/2009	Wild type virus			CDC, USA
	NYMC-BX-39 ^{###}	Classical	NYMC, USA	NYMC, USA NIBSC,UK
B/Wisconsin/1/2010	Wild type virus			CDC, USA NIBSC,UK
	NYMC-BX-41A [#]	Classical	NYMC, USA	NYMC, USA NIBSC,UK
B/Texas/6/2011	Wild type virus			WHO CCs NIBSC,UK

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
	NYMC BX-49 ^{###}	Classical	NYMC, USA	WHO CCs NYMC, USA NIBSC, UK
B/Finland/39/2010	NYMC BX-45 [#]	Classical	NYMC, USA	NYMC, USA
	NYMC BX-45A ^{###}	Classical	NYMC, USA	NYMC, USA
B/Massachusetts/2/2012	Wild type virus			CDC, USA
	NYMC BX-51B ^{##}	Classical	NYMC, USA	CDC, USA NYMC, USA
	NYMC BX-51C ^{###}	Classical	NYMC, USA	CDC, USA NYMC, USA

[#] B/Lee/40 backbone parent

^{##} B/Panama/45/90 backbone parent

^{###} B/Lee/40 and B/Panama/45/90 backbone parents

Institutes contact details for candidate vaccine viruses' orders/information:

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

NIID: flu-vaccine@nih.go.jp

CDC: xxu@cdc.gov

NYMC: doris_bucher@nymc.edu

Reference antigens (freeze-dried)

Victoria lineage

Starting materials			Ref Ag	Unitage	Available from
Parent virus	CVV	Egg or Cell	Lot #	(µgHA/mL)	
B/Brisbane/60/2008 (wild type)		Egg	08/352	27	NIBSC
			2011/89B	74	TGA
			68	60	CBER/FDA
			2010BA	63	NIID
	NYMC BX-35		10/106	48	NIBSC

Yamagata lineage

Starting materials			Ref Ag	Unitage	Available from
Parent virus	CVV	Egg or Cell	Lot #	(µgHA/mL)	
B/Hubei-Wujiagang/158/2009	NYMC BX-39	Egg	B-Ag-1210*	67	CBER/FDA
			2012/93B	80	TGA
			12/106*	88	NIBSC
B/Wisconsin/1/2010		Cell	12/110	57	NIBSC

***new reference antigen**

Sheep antisera

Victoria lineage

Purified HA from		Order Lot #	Available from
Parent virus	Egg or Cell		
B/Brisbane/60/2008 (wild type)	Egg	11/136	NIBSC
		AS397-1	TGA
		B-Ab-1108	CBER/FDA
		B-Ab-1215*	CBER/FDA
		B-Ab-1216*	CBER/FDA
		2010B-1	NIID

***new reference antisera**

Yamagata lineage

Purified HA from		Order Lot #	Available from
Parent virus	Egg or Cell		
B/Hubei-Wujiagang/158/2009	Egg	B-Ab-1116[#]	CBER/FDA
		B-Ab-1208[#]	CBER/FDA
B/Wisconsin/1/2010	Egg	AS402	TGA
		12/118*	NIBSC

***new reference antisera**

new lot number

The above-listed potency testing reagents have been developed with support from manufacturers, and calibrated by the Essential Regulatory Laboratories (ERLs) that provide advice to WHO as part of the influenza vaccine virus selection and development process.

ERLs contact details for reagents orders/information: :

NIBSC: standards@nibsc.org
TGA: influenza.reagents@tga.gov.au
NIID: flu-vaccine@nih.go.jp
CBER/FDA: Rajesh.Gupta@fda.hhs.gov

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

For other candidate vaccine viruses and potency testing reagents, please go to
<http://www.who.int/influenza/vaccines/virus/en>