

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](#)

21 June 2012

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
	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

Candidate vaccine viruses – continued

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/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

- NYMC BX-47A, a reassortant developed from B/Nevada/3/2011 has failed 2-way haemagglutination inhibition (HI) test by the WHO Collaborating Center for influenza of GISRS at CDC Atlanta, United States of America.

Yamagata lineage

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

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
B/Wisconsin/1/2010	Wild type virus			CDC, USA
	NYMC-BX-41A [#]	Classical	NYMC, USA	NYMC, USA
B/Texas/6/2011	Wild type virus			WHO CCs
	NYMC BX-49 ^{###}	Classical	NYMC, USA	WHO CCs NYMC, USA
B/Finland/39/2010	NYMC BX-45 [#]	Classical	NYMC, USA	NYMC, USA
	NYMC BX-45A ^{###}	Classical	NYMC, 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.hpa.org.uk or enquiries@nibsc.hpa.org.uk

NIID: flu-vaccine@nih.go.jp

CDC: axk0@cdc.gov

NYMC: doris_bucher@nymc.edu

Reference antigens (freeze-dried)

Victoria lineage

Starting materials			Ref Ag Lot #	Unitage (µgHA/mL)	Available from
Parent virus	CVV	Egg or Cell			
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 Lot #	Unitage (µgHA/mL)	Available from
Parent virus	CVV	Egg or Cell			
B/Hubei- Wujiagang/158/2009	NYMC BX-39	Egg	B-Ag-1111	75	CBER/FDA
*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
		2010B-1	NIID

Yamagata lineage

Purified HA from		Order Lot #	Available from
Parent virus	Egg or Cell		
B/Hubei-Wujiagang/158/2009	Egg	B-Ab-1112	CBER/FDA
		B-Ab-1116	CBER/FDA

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.hpa.org.uk
TGA: influenza.standards@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>