

Summary of status of development and availability of A/California/7/2009 (H1N1)-like candidate vaccine viruses* and potency testing reagents

*antigenic and genetic analysis are performed by the WHO Collaborating Centres of the Global Influenza Surveillance Network. [National or Regional control authorities approve the composition and formulation of vaccines used in each country](#)

4 May 2011

Candidate vaccine viruses

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/ChristChurch/16/2010 (H1N1)	Wild type virus			WHO CCs
	NIB-74	Classical	NIBSC, UK	NIBSC, UK
A/Brisbane/10/2010 (H1N1)	Wild type virus			WHO CCs
	IVR-158	Classical	CSL, Australia	CSL, Australia
A/California/7/2009(H1N1)	Wild type virus			WHO CCs
	X-179A	Classical	New York Medical College, USA	CDC, USA NIBSC, UK NIID, Japan
	IVR-153		CSL, Australia	CSL, Australia NIBSC, UK NIID, Japan
	X-181		New York Medical College, USA	New York Medical College, USA NIBSC, UK NIID, Japan
	X-181A			
	NIBRG-121	Reverse Genetics	NIBSC, UK	NIBSC, UK
	NIBRG-121xp			
	NIIDRG-5		NIID, Japan	NIID, Japan
A/California/4/2009(H1N1)	Wild type virus			WHO CCs
	CBER-RG2	Reverse Genetics	CBER/FDA, USA	CDC, USA NIID, Japan
A/Texas/5/2009(H1N1)	Wild type virus			WHO CCs
	IDCDC-RG15	Reverse Genetics	CDC, USA	CDC, USA NIID, Japan
	IDCDC-RG20			CDC, USA NIID, Japan
A/England/195/2009(H1N1)	Wild type virus			WHO CCs
	NIBRG-122	Reverse Genetics	NIBSC, UK	NIBSC, UK
A/Texas/5/2009(H1N1) and A/New York/18/2009(H1N1)	IDCDC-RG18	Reverse Genetics	CDC, USA	CDC, USA NIID, Japan

Candidate vaccine viruses - continued

Parent virus	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/NewYork/18/2009(H1N1)	Wild type virus			WHO CCs NIBSC, UK
	IDCDC-RG22	Reverse Genetics	CDC, USA	CDC, USA NIID, Japan

Details of individual candidate reassortant vaccine viruses and instructions of how to obtain them can be found on the WHO web site at:

<http://www.who.int/csr/disease/swineflu/guidance/vaccines/candidates/en/index.html>

Reference antigens (freeze-dried)

Parent virus	Starting materials		Ref Ag Lot #	Unitage (µgHA/mL)	Available from
	Candidate vaccine virus	Egg or Cell			
A/California/7/2009(H1N1)	NYMC X-179A	Egg	2009/83B	65	TGA
			09/146	50	NIBSC
			69	63 ¹	CBER/FDA
			2010AH1VA	80	NIID
	NYMC X-181		2009/84B	68	TGA
			09/294	34	NIBSC
			H1-Ag-1002	79	CBER/FDA
	NIBRG-121xp		09/196	37	NIBSC
	NYMC X-179A	Cell	09/174	45-55 ²	NIBSC
*A/Christchurch/16/2010	NIB-74	Egg	10/258	29	NIBSC

***new reagent**

¹ applications with vaccines made from heterologous candidate vaccine virus require verification and potential re-calibration

² estimated potency range

Sheep antisera

Purified HA from		Order / Lot #	Available from
Parent virus	Egg or Cell		
A/California/7/2009 (H1N1) NIBRG-121xp	Egg	10/230	NIBSC
A/California/7/2009 (H1N1) NYMC X-179A		2010AH1V-1	NIID

The above-listed potency testing reagents for A/California/7/2009 (H1N1)-like vaccines 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:

CBER/FDA: Rajesh.Gupta@fda.hhs.gov
 NIBSC: standards@nibsc.hpa.org.uk
 NIID: sitamura@nih.go.jp
 TGA: influenza.standards@tga.gov.au

International antibody standard

Parent virus	Order/Lot #	Available from
A/California/7/2009 (H1N1)v-like	09/194	NIBSC

ERL contact details for antibody standard order/information:

NIBSC: standards@nibsc.hpa.org.uk

For general enquiries, please contact GISN@who.int.

For other candidate vaccine viruses and potency testing reagents, please go to <http://www.who.int/csr/disease/influenza/vaccinerecommendations2/en/index.html>.