

Summary of status of development and availability of avian influenza A(H7N9) candidate vaccine viruses and potency testing reagents

8 November 2018

Candidate vaccine viruses

Antigenic prototype	Candidate vaccine virus	Type of virus or reassortant	Developing institute	Available from
A/Guangdong/17SF003/2016	Wild type virus			WHO CCs
	CNIC-GD003*	Reverse genetics	CCDC, China	CCDC, China
	CBER-RG7C*	Reverse genetics	CBER/FDA, USA	CBER/FDA, USA
	IDCDC-RG56N*	Reverse genetics	CDC, USA	CDC, USA
	CBER-RG7D*	Reverse genetics	CBER/FDA, USA	CBER/FDA, USA
A/Hong Kong/125/2017	Wild type virus			CDC, USA
	IDCDC-RG56B*	Reverse genetics	CDC, USA	CDC, USA
A/Shanghai/2/2013 Synthetic HA&NA	Wild type virus			CDC, USA
	IDCDC-RG32A*	Reverse genetics	CDC, USA	CDC, USA NIBSC, UK CBER, USA
	IDCDC-RG32A.3*	Reverse genetics	CDC, USA	CDC, USA
	NIBRG-267*	Reverse genetics	NIBSC, UK	NIBSC, UK
	CBER-RG4A*	Reverse genetics	CBER, USA	CBER, USA
A/Anhui/1/2013	Wild type virus			WHO CCs
	NIBRG-268*	Reverse genetics	NIBSC, UK	NIBSC, UK
	NIIDRG-10.1*	Reverse genetics	NIID, Japan	NIID, Japan
	IDCDC-RG33A*	Reverse genetics	CDC, USA	CDC, USA
	SJ005*	Reverse genetics	SJCRH, USA	SJCRH, USA

*These viruses are candidate vaccine viruses which have passed relevant safety testing and two-way haemagglutination inhibition (HI) tests. They can be handled under BSL-2 enhanced containment¹.

¹ http://www.who.int/biologicals/areas/vaccines/influenza/biosafety_risk_assessment_10may2013.pdf
<http://www.who.int/biologicals/publications/trs/areas/vaccines/influenza/Annex%205%20human%20pandemic%20influenza.pdf?ua=1>

Candidate vaccine viruses in preparation

Antigenic prototype	Developing Institute	Available from
A/Hunan/02650/2016	CCDC, China	pending

Institutes contact details for candidate vaccine viruses orders/information:

CBER: CBERshippingrequests@fda.hhs.gov
CDC: dwentworth@cdc.gov (Subject: CVV request)
NIBSC: standards@nibsc.org or enquiries@nibsc.org
NIID: nobusawa@nih.go.jp
SJCRH: richard.webby@stjude.org
WHO CCs: http://www.who.int/influenza/gisrs_laboratory/collaborating_centres/list/en/

Reference antigens

Starting materials		Ref. Ag. Lot number	Unitage (µgHA/ml)	Available from
Antigenic prototype	Candidate vaccine virus			
A/Anhui/1/2013	NIBRG-268	14/250	37	NIBSC, UK
A/Shanghai/2/2013	IDCDC-RG32A	2014/100B	72	TGA, Australia
	PR8-IDCDC-RG32A	78	60	CBER, USA**

** All requests for reagents to CBER will be evaluated upon justification provided.
 Distribution may be restricted

Sheep antisera

Antigenic prototype	Order Lot number	Available from
A/Anhui/1/2013	13/180	NIBSC, UK
	13/166 [§]	
A/Shanghai/2/2013	H7-Ab-1320 [#]	CBER, USA**
	H7-Ab-1322 ^{##}	
	H7-Ab-1322a ^{##}	

[§] Anti NA serum for tests of neuraminidase identification

[#] Primed with bromelain-cleaved HA from A/Mallard/Netherlands/12/2000 (H7N3), boosted with bromelain-cleaved HA from egg grown A/Shanghai/02/2013 PR8-IDCDC-RG32A reassortant; an additional boost with influenza H7 (A/Shanghai/02/2013) virus-like particles prepared in Vero cells

^{##} Primed and boosted with bromelain-cleaved HA from egg grown A/Shanghai/02/2013 PR8-IDCDC-RG32A reassortant; an additional boost with influenza H7 (A/Shanghai/02/2013) virus-like particles prepared in Vero cells

** All requests for reagents to CBER will be evaluated upon justification provided.
 Distribution may be restricted

ERLs contact details for reagent orders and other information:

CBER: CBERshippingrequests@fda.hhs.gov

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

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/

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