

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

26 September 2019

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
	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
	NIBRG-375*	Reverse genetics	NIBSC, UK	NIBSC, UK
A/Hong Kong/125/2017	Wild type virus			CDC, USA
	IDCDC-RG56B*	Reverse	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
	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. They can be handled under BSL-2 enhanced containment¹.*

Candidate vaccine viruses in preparation

Antigenic prototype	Developing Institute	Available from
A/Gansu/23277/2019-like#	CDC, USA	Pending
A/Hunan/02650/2016	CCDC, China	Pending

#New candidate vaccine virus shown in blue

Institutes contact details for candidate vaccine virus orders/information:

CBER: CBERshippingrequests@fda.hhs.gov
CDC: dwentworth@cdc.gov (Subject: CVV request)
CCDC: whocc-china@cnic.org.cn
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**
A/Guangdong/17SF003/2016	NIBRG-375	18/196	59	NIBSC, UK

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

New reagents shown in blue.

Sheep antisera

Antigenic prototype	Order Lot number	Available from
A/Anhui/1/2013	13/180	NIBSC, UK
	13/166 ⁵	
A/Shanghai/2/2013	H7-Ab-1320 [#]	CBER, USA**
	H7-Ab-1322 ^{##}	
	H7-Ab-1322a ^{##}	

⁵ 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

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>

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