

We acknowledge the authors, originating and submitting laboratories of the sequences from GISAID's EpiFlu™ Database on which this research is based. The list is detailed below.
 All submitters of data may be contacted directly via the GISAID website www.gisaid.org

Segment ID	Segment	Country	Collection d	Isolate-ID	Isolate name	Originating Lab	Submitting Lab	Authors
EPI627992	HA	China	2014-Jan-30	EPI_ISL_192400	A/Guangdong/0071/2014	WHO Chinese National Influenza Center	WHO Chinese National Influenza Center	Wang,Dayan;Gao,Rong;Yang,Lei;Zhou,Shumei;Li,Xiyang;Zhou,Jianfang;Zhu,Wenfei;Guo,Junfeng;Li,Xiaodan;Dong,Jie;Huang,Wei;Zhang,Ye;Dong,Libo;Zhao,Xiang;Lu,Jian;Lian,Yu;Shu,Yuelong
EPI8767	HA	Italy	1999-Sep-23	EPI_ISL_1987	A/turkey/Italy/3489/99		Import from public-domain	
EPI69139	HA	Italy	1999-Sep-23	EPI_ISL_21012	A/turkey/Italy/3489/99		Import from public-domain	
EPI172896	HA	United Kingdom	2008-Jun-04	EPI_ISL_212460	A/chicken/England/12282/2008	Animal and Plant Health Agency (APHA)	Animal and Plant Health Agency (APHA)	Seekings, A; Russell, C; Ceeraz, V; Cox, W; Manvell, R; Brown, I
EPI740662	HA	China	2014-Feb-26	EPI_ISL_217938	A/Anser cygnoides/Hubei/Chenhuo	State Key Laboratory of Virology and Wuhan Institute of Virology	Wuhan Institute of Virology	
EPI855671	HA	Japan	2014-Nov-01	EPI_ISL_237149	A/duck/Shimane/321108/2014	National Institute of Animal Health	National Institute of Animal Health	
EPI855695	HA	Japan	2014-Nov-01	EPI_ISL_237152	A/duck/Kumamoto/431105/2014	National Institute of Animal Health	National Institute of Animal Health	
EPI919607	HA	China	2017-Jan-03	EPI_ISL_249309	A/Guangdong/175F003/2016		WHO Chinese National Influenza Center	
EPI1010184	HA	China	2017-Jun-19	EPI_ISL_266963	A/Guangdong/175F003/2016		National Institute for Biological Standards and Control (NIBSI)	Nicolson, Carolyn
EPI1010186	HA	United Kingdom	2017-Jun-19	EPI_ISL_266964	A/Guangdong/175F003/2016	NIBRG-375	National Institute for Biological Standards and Control (NIBSI)	Nicolson, Carolyn
EPI1018239	HA	China	2017-Feb-28	EPI_ISL_268523	A/Guangxi/5/2017		Guangxi Center for Disease Prevention and Control	
EPI1075379	HA	China	2017-Jan-03	EPI_ISL_280901	A/Guangdong/175F003/2016-1	National Institute of Animal Health	National Institute of Animal Health	Uchida,Y
EPI1075387	HA	China	2017-Jan-03	EPI_ISL_280902	A/Guangdong/175F003/2016	National Institute of Animal Health	National Institute of Animal Health	Uchida,Y
EPI105853	HA	Japan	2015-Jan-01	EPI_ISL_285845	A/duck/Ibaraki/1/2015	National Institute of Animal Health	National Institute of Animal Health	Mine,J
EPI1226523	HA	Korea, Rept	2017-Mar-21	EPI_ISL_309203	A/mallard/Korea/H1065-1/2017		Animal and Plant Quarantine Agency (APQA)	
EPI1226803	HA	Korea, Rept	2015-Mar-02	EPI_ISL_309238	A/environment/Korea/H2438/2015		Animal and Plant Quarantine Agency (APQA)	
EPI290267	HA	Netherlands	2003-Mar-01	EPI_ISL_82405	A/chicken/Netherlands/621571/03(H7N7)		Wageningen Bioveterinary Research	
EPI319877	HA	Netherlands	2003-Jan-01	EPI_ISL_90877	A/Netherlands/080/03	National Institute for Public Health and the Environment (RIVM)	National Institute for Public Health and the Environment (RIVM)	Meijer,A; Jonges,M;
EPI1139730	HA,NA	China	2018-Jan-06	EPI_ISL_291111	A/Jiangsu/1/2018(H7N4)	Jiangsu Provincial Center for Disease Control & Prevention	Jiangsu Provincial Center for Disease Control & Prevention	Foucher,RAM
EPI372511	NA	Ukraine	2006-Aug-13	EPI_ISL_120214	A/garganey/Ukraine/05835-NAMF	U.S. Naval Medical Research Unit No.3	Centers for Disease Control and Prevention	Gerloff, Nancy; Simpson, Natasha; Jones, Joyce; Kis, Zoltan; Bahgat, Verina; Soliman, Atef; Ellassal, Emad; Ahmed, Lu'ay; Gaynor, Anne; Cornelius, Claire; Davis, Todd
EPI484576	NA	Bangladesh	2011-Apr-03	EPI_ISL_149695	A/duck/Bangladesh/814/2011	icddr, b International Centre for Diarrhoeal Disease Research and Control	Centers for Disease Control and Prevention	Gerloff, Nancy; Simpson, Natasha; Davis, C. Todd
EPI484579	NA	Bangladesh	2011-Apr-03	EPI_ISL_149697	A/duck/Bangladesh/727/2011	icddr, b International Centre for Diarrhoeal Disease Research and Control	Centers for Disease Control and Prevention	Gerloff, Nancy; Simpson, Natasha; Davis, C. Todd
EPI866825	NA	Japan	2016-Oct-18	EPI_ISL_239392	A/duck/Aichi/231001/2016		National Institute of Animal Health	
EPI884264	NA	Russian Fed	2014-Sep-11	EPI_ISL_240681	A/mallard/Chany/126K-2/2014	Research Institute of Experimental and Clinical Medicine	Research Institute of Experimental and Clinical Medicine	Sharshov, K.A.; Sobolev, I.A.; Xinxin, Li; Alkina, T.Y.; Glushenko, A.V.; Kurskaya, O.G.; Kabilov, M.R.; Alekseev, A.Yu.; Shestopalov, A.M.
EPI993050	NA	Japan	2008-Jan-01	EPI_ISL_262476	A/duck/Chiba/17/2008	National Institute of Animal Health	National Institute of Animal Health	Junki, M
EPI169315	NA	Sweden	1984-Oct-01	EPI_ISL_26286	A/Mink/Sweden/3900/1984	National Veterinary Institute	National Veterinary Institute	
EPI169463	NA	United Kingdom	1985-Jan-01	EPI_ISL_26345	A/Fowl/Hampshire/PD378/1985	Veterinary Laboratories Agency, Weybridge	National Veterinary Institute	
EPI178495	NA	Italy	2004-Jan-01	EPI_ISL_29991	A/Duck/Italy/268302/2004		Istituto Zooprofilattico Sperimentale, Lombardia, Emilia Romagna	ISZSLER
EPI1229841	NA	Netherlands	2010-Jun-04	EPI_ISL_309800	A/Chicken/Netherlands/10009401	Wageningen Bioveterinary Research	Wageningen Bioveterinary Research	Bergervooet, Saskia; Heutink, Rene; Harders, Frank; Beerens, Nancy
EPI660824	NP	China	2015-Feb-05	EPI_ISL_199310	A/chicken/Jiangxi/02.05 YGYXG001-P/2015(H3N2)		Institute of Microbiology, Chinese Academy of Sciences	
EPI661872	NP	China	2015-Apr-10	EPI_ISL_199441	A/chicken/Guangxi/04.10 NM140-O/2015(H4N3)		Institute of Microbiology, Chinese Academy of Sciences	
EPI664214	NP	China	2015-Jan-14	EPI_ISL_200238	A/duck/Jiangxi/01.14 NCID034-P/2015(Mixed)		Institute of Microbiology, Chinese Academy of Sciences	
EPI855496	NP	Japan	2015-Nov-01	EPI_ISL_237128	A/duck/Shimane/321101/2015	National Institute of Animal Health	National Institute of Animal Health	
EPI855504	NP	Japan	2014-Dec-01	EPI_ISL_237129	A/duck/Tottori/311217/2014	National Institute of Animal Health	National Institute of Animal Health	
EPI855600	NP	Japan	2014-Nov-01	EPI_ISL_237141	A/duck/Shimane/321112/2014	National Institute of Animal Health	National Institute of Animal Health	
EPI866843	NP	Japan	2016-Oct-18	EPI_ISL_239395	A/duck/Aichi/231008/2016		National Institute of Animal Health	
EPI866867	NP	Japan	2016-Oct-18	EPI_ISL_239398	A/duck/Aichi/231013/2016		National Institute of Animal Health	
EPI884234	NP	Russian Fed	2015-Oct-27	EPI_ISL_240674	A/pintail/Russia_Primorje/222/20	Research Institute of Experimental and Clinical Medicine	Research Institute of Experimental and Clinical Medicine	Shchelkanov, M.Yu.; Galkina, I.V.; Sharshov, K.A.; Alexeev, A.Y.; Sobolev, I.A.; Alkina, T.Y.; Kabilov, M.R.; Shestopalov, A.M.
EPI1226732	NP	Korea, Rept	2012-Dec-02	EPI_ISL_309230	A/northern pintail/Korea/WB1833/2012		Animal and Plant Quarantine Agency (S-2158)	
EPI1226772	NP	Korea, Rept	2013-Dec-11	EPI_ISL_309235	A/mallard/Korea/WB556/2013		Animal and Plant Quarantine Agency (APQA)	
EPI1226804	NP	Korea, Rept	2016-Feb-16	EPI_ISL_309239	A/mallard/Korea/A15/2016		Animal and Plant Quarantine Agency (APQA)	
EPI490871	PA	Germany	2013-Apr-11	EPI_ISL_146472	A/turkey/Germany-NI/R534/2013		Friedrich-Loeffler-Institut	
EPI740605	PA	China	2013-Dec-05	EPI_ISL_217931	A/Phalacrocorax carbo/Hubei/Hor State Key Laboratory of Virology and Wuhan Institute of Virology		Wuhan Institute of Virology	
EPI823771	PA	Russian Fed	2012-Aug-26	EPI_ISL_231643	A/pintail/Chany Lake/37/2012	Research Institute of Experimental and Clinical Medicine	Research Institute of Experimental and Clinical Medicine	Gulyaeva, M.A.; Sharshov, K.A.; Sobolev, I.A.; De Marco, M.A.; Delogou, M.; Kabilov, M.R.; Shestopalov, A.M.

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 Shestopalov, A.M.

EPI884244	PA	Russian Fed	2014-Sep-10	EPI_ISL_240672	A/shoveler/Chany/82K/2014	Research Institute of Experimental and Clinical	Research Institute of Experimental and Clinical Medicine
EPI1147942	PA	Korea, Rept	2012-Mar-01	EPI_ISL_292792	A/wild bird/Korea/A10/2012	Animal and Plant Quarantine Agency (O-2144	Animal and Plant Quarantine Agency (S-2145)
EPI866839	PB2	Japan	2016-Oct-18	EPI_ISL_239394	A/duck/Aichi/231003/2016	National Institute of Animal Health	National Institute of Animal Health
EPI1226536	PB2	Korea, Rept	2017-Feb-16	EPI_ISL_309205	A/mallard/Korea/H917/2017	Animal and Plant Quarantine Agency (APOA)	Animal and Plant Quarantine Agency (APOA)
EPI1226544	PB2	Korea, Rept	2017-Mar-13	EPI_ISL_309206	A/mandarin duck/Korea/H1030-2/2017	Animal and Plant Quarantine Agency (APOA)	Animal and Plant Quarantine Agency (APOA)
EPI1226688	PB2	Korea, Rept	2017-Jan-24	EPI_ISL_309224	A/norther pintail/Korea/H895-3/2017	Animal and Plant Quarantine Agency (APOA)	Animal and Plant Quarantine Agency (APOA)
EPI1139887	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_291131	A/Chicken/Jiangsu/1/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150038	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293286	A/Chicken/Jiangsu/103/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150046	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293287	A/Duck/Jiangsu/4/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150062	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293288	A/Duck/Jiangsu/8/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150063	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293289	A/Duck/Jiangsu/12/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150071	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293290	A/Duck/Jiangsu/13/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1150079	PB2,PA,NP,HA,NA	China	2018-Jan-06	EPI_ISL_293291	A/Duck/Jiangsu/16/2018(H7N4)	Jiangsu Provincial Center for Disease Control	Jiangsu Provincial Center for Disease Control & Prevention
EPI1326416	PB2,PA,NP,HA,NA	China	2018-Jan-25	EPI_ISL_332358	A/chicken/Jiangsu/1/2018	Harbin Veterinary Research Institute (CAAS)	Harbin Veterinary Research Institute (CAAS)
EPI1326734	PB2,PA,NP,HA,NA	China	2018-Jan-25	EPI_ISL_332395	A/chicken/Jiangsu/2/2018	Harbin Veterinary Research Institute (CAAS)	Harbin Veterinary Research Institute (CAAS)
EPI1326742	PB2,PA,NP,HA,NA	China	2018-Jan-25	EPI_ISL_332396	A/chicken/Jiangsu/3/2018	Harbin Veterinary Research Institute (CAAS)	Harbin Veterinary Research Institute (CAAS)
EPI1326803	PB2,PA,NP,HA,NA	China	2018-Jan-25	EPI_ISL_332399	A/duck/Jiangsu/1/2018	Harbin Veterinary Research Institute (CAAS)	Harbin Veterinary Research Institute (CAAS)
EPI1326820	PB2,PA,NP,HA,NA	China	2018-Jan-25	EPI_ISL_332401	A/duck/Jiangsu/2/2018	Harbin Veterinary Research Institute (CAAS)	Harbin Veterinary Research Institute (CAAS)

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 Minghui,Li; Song,Jin;
 Yanbing,Li