

FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

Genotyping Report

Report Date for this Batch: 31 July 2013

FMDV type A

Country: Kazakhstan

Period: 2013

No. of sequences: 2

Originator: [REDACTED] Federal Centre for Animal
Health (FGI ARRIAH), Yur'evets, Vladimir, 600900, Russia,
600900 Yur'evets.



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FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

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Serotype: A WRLFMD Ref No: KAZ/1/2013* Batch No: WRLMEG/2013/00017 Sender Ref: A/KAZ/1/2013 Location: Akshoky, Urdzharsky, East Kazakhstan, Kazakhstan Date collected: 09/05/2013 Date received by WRLFMD: 31/07/2013 Date received for sequencing: n/a Species: Cattle Material used: epithelium Region sequenced: VP1 RT-PCR primers: Not known	Report date: 31/07/2013 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: Sea-97 Sequence filename: KAZ13-AA.SEQ Date sequence last updated: 31/07/2013 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 1659 Min. no. of nt for comparison: 600 Total turn-around time: 0 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/GDMM-CHA-2013-S (LVRI)	CHA13-AA	636	631	0	99.21	0.79	ASIA	Sea-97
2	A/Zabaikalsky/RUS/2013 (ARRIAH)	RUS13-AA	636	631	0	99.21	0.79	ASIA	Sea-97
3	A/KAZ/2/2013* (ARRIAH)	KAZ13-AB	636	630	0	99.06	0.94	ASIA	Sea-97
4	A/Amur/RUS/2013* (ARRIAH)	RUS13-AG	636	629	0	98.90	1.10	ASIA	Sea-97
5	A/QHXN-CHA-2013-B (LVRI)	CHA13-AB	633	624	0	98.58	1.42	ASIA	Sea-97
6	A/TAI/15/2012	TAI12-15	636	627	0	98.58	1.42	ASIA	Sea-97
7	A/TAI/1/2011	TAI11-01	636	617	0	97.01	2.99	ASIA	Sea-97
8	A/TAI/3/2011	TAI11-03	636	617	0	97.01	2.99	ASIA	Sea-97
9	A/TAI/8/2010	TAI10-08	636	616	0	96.86	3.14	ASIA	Sea-97
10	A/THA 66-1/10* (TRRL)	TAI10-AA	636	616	0	96.86	3.14	ASIA	Sea-97

Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/TAI/7/2003 (HQ116312)	TAI03-07	636	593	0	93.24	6.76	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	574	0	90.25	9.75	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	554	0	87.11	12.89	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	524	0	82.39	17.61	ASIA	A ₂₂
5	A/IRN/2/87 (EF208770)	IRN87-02	633	519	0	81.99	18.01	ASIA	Iran-87
6	A/TUR/1/2008	TUR08-01	636	514	0	80.82	19.18	ASIA	Iran-05 ^{ARD-07}
7	A/IRN/1/2005 (EF208769)	IRN05-01	636	513	0	80.66	19.34	ASIA	Iran-05
8	A/IRN/78/2009	IRN09-78	636	513	0	80.66	19.34	ASIA	Iran-05 ^{FAR-09}
9	A/TUR/33/2008	TUR08-33	636	513	0	80.66	19.34	ASIA	Iran-05 ^{EZM-07}
10	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	513	0	80.66	19.34	ASIA	A15

nt, nucleotides

*. not a WRLFMD reference number

Assembled with Report Generator v4.1

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Serotype: A WRLFMD Ref No: KAZ/2/2013* Batch No: WRLMEG/2013/00017 Sender Ref: A/KAZ/2/2013 Location: Ahmetbulak, Tarbagaysky, East Kazakhstan, Kazakhstan Date collected: 04/06/2013 Date received by WRLFMD: 31/07/2013 Date received for sequencing: n/a Species: Cattle Material used: epithelium Region sequenced: VPI RT-PCR primers: Not known	Report date: 31/07/2013 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: Sea-97 Sequence filename: KAZ13-AB.SEQ Date sequence last updated: 31/07/2013 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 1659 Min. no. of nt for comparison: 600 Total turn-around time: 0 days
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1	A/GDMM-CHA-2013-S (LVRI)	CHA13-AA	636	633	0	99.53	0.47	ASIA	Sea-97
2	A/Zabaikalsky/RUS/2013 (ARRIAH)	RUS13-AA	636	633	0	99.53	0.47	ASIA	Sea-97
3	A/Amur/RUS/2013* (ARRIAH)	RUS13-AG	636	631	0	99.21	0.79	ASIA	Sea-97
4	A/KAZ/1/2013* (ARRIAH)	KAZ13-AA	636	630	0	99.06	0.94	ASIA	Sea-97
5	A/TAI/15/2012	TAI12-15	636	629	0	98.90	1.10	ASIA	Sea-97
6	A/QHXN-CHA-2013-B (LVRI)	CHA13-AB	633	626	0	98.89	1.11	ASIA	Sea-97
7	A/TAI/1/2011	TAI11-01	636	619	0	97.33	2.67	ASIA	Sea-97
8	A/TAI/3/2011	TAI11-03	636	619	0	97.33	2.67	ASIA	Sea-97
9	A/TAI/8/2010	TAI10-08	636	618	0	97.17	2.83	ASIA	Sea-97
10	A/THA 66-1/10* (TRRL)	TAI10-AA	636	618	0	97.17	2.83	ASIA	Sea-97
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3	A/TAI/118/87* (EF208777)	TAI87-AD	636	555	0	87.26	12.74	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	525	0	82.55	17.45	ASIA	A22
5	A/IRN/2/87 (EF208770)	IRN87-02	633	520	0	82.15	17.85	ASIA	Iran-87
6	A/TUR/1/2008	TUR08-01	636	517	0	81.29	18.71	ASIA	Iran-05 ^{ARD-07}
7	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
8	A/IRN/78/2009	IRN09-78	636	516	0	81.13	18.87	ASIA	Iran-05 ^{FAR-09}
9	A/TUR/33/2008	TUR08-33	636	516	0	81.13	18.87	ASIA	Iran-05 ^{EZM-07}
10	A/GHA/16/73	GHA73-16	633	513	0	81.04	18.96	AFRICA	G-VI

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Kazakhstan in 2013

Batch: WRLMEG/2013/00017

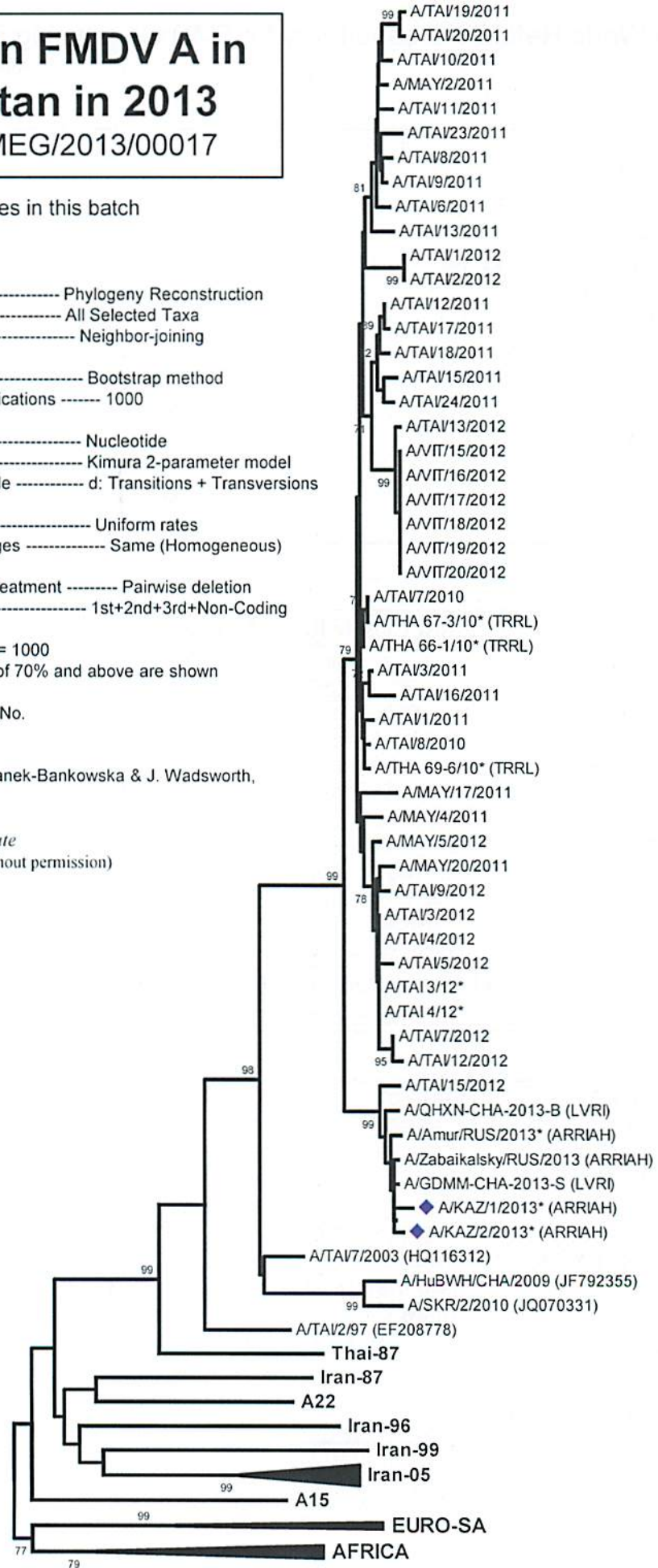
◆ indicates viruses in this batch

Software: MEGA 5.2
 Analysis
 Analysis ----- Phylogeny Reconstruction
 Scope ----- All Selected Taxa
 Statistical Method ----- Neighbor-joining
 Phylogeny Test
 Test of Phylogeny ----- Bootstrap method
 No. of Bootstrap Replications ----- 1000
 Substitution Model
 Substitutions Type ----- Nucleotide
 Model/Method ----- Kimura 2-parameter model
 Substitutions to Include ----- d: Transitions + Transversions
 Rates and Patterns
 Rates among Sites ----- Uniform rates
 Pattern among Lineages ----- Same (Homogeneous)
 Data Subset to Use
 Gaps/Missing Data Treatment ----- Pairwise deletion
 Codons Included ----- 1st+2nd+3rd+Non-Coding
 No. of Sites : 639
 No Of Bootstrap Reps = 1000
 Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, K. Bachanek-Bankowska & J. Wadsworth,
 31 July 2013

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Sea-97

ASIA

0.02