

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

## Genotyping Report

Report Date for this Batch: 18 June 2013

FMDV type A

Country: Egypt

Period: 2013

No. of samples: 10

BATCH: WRLFMD/2013/00012



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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A WRLFMD Ref No: EGY/3/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 2.RL/421 Location: Shobra, Quesna, Monofia, Delta region, Egypt Date collected: 08/01/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 04/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-03.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/EGY/6/2013	EGY13-06	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/10/2013	PAT13-10	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/11/2013	PAT13-11	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/PAT/12/2013	PAT13-12	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/13/2013	EGY13-13	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/14/2013	EGY13-14	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/17/2013	EGY13-17	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	610	0	95.46	4.54	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	601	0	94.05	5.95	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	600	0	93.90	6.10	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	597	0	93.43	6.57	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/15/2012	IRN12-15	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	582	0	91.08	8.92	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: EGY/5/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 5.RL/471 Location: Gerbal, Damanhor, Behaira, Delta region, Egypt Date collected: 31/03/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-05.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 days
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Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
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2	A/EGY/12/2013	EGY13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/EGY/6/2013	EGY13-06	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/EGY/17/2013	EGY13-17	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/10/2013	PAT13-10	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/PAT/11/2013	PAT13-11	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/PAT/12/2013	PAT13-12	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/13/2013	EGY13-13	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/14/2013	EGY13-14	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
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3	A/IRN/1/2005 (EF208769)	IRN05-01	639	600	0	93.90	6.10	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	597	0	93.43	6.57	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/15/2012	IRN12-15	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	581	0	90.92	9.08	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: EGY/6/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 8.RL/480 Location: Rowina, Kafr Elsheikh, Kafr Elsheikh, Delta region, Egypt Date collected: 04/02/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Water Buffalo Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez  Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-06.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/EGY/17/2013	EGY13-17	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/EGY/3/2013	EGY13-03	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/EGY/5/2013	EGY13-05	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/PAT/10/2013	PAT13-10	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/PAT/11/2013	PAT13-11	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/PAT/12/2013	PAT13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/13/2013	EGY13-13	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	601	0	94.05	5.95	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/15/2012	IRN12-15	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\* , not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: EGY/11/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 4.RL/553 Location: Damtio, Damanhor, Behaira, Delta region, Egypt Date collected: 23/02/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-11.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/12/2013	EGY13-12	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/15/2013	EGY13-15	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/PAT/10/2013	PAT13-10	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/PAT/11/2013	PAT13-11	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/12/2013	PAT13-12	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/EGY/13/2013	EGY13-13	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/14/2013	EGY13-14	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/6/2013	EGY13-06	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/17/2013	EGY13-17	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/3/2013	EGY13-03	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	601	0	94.05	5.95	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/15/2012	IRN12-15	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	582	0	91.08	8.92	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

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Serotype: A WRLFMD Ref No: EGY/12/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 9.RL/552 Location: Kom Elzebdia, Damanhor, Behaira, Delta region, Egypt Date collected: 24/02/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Water Buffalo Material used: BTy1 31/05/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-12.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 days
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1	A/EGY/11/2013	EGY13-11	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/15/2013	EGY13-15	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
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5	A/PAT/12/2013	PAT13-12	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/EGY/13/2013	EGY13-13	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/14/2013	EGY13-14	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/6/2013	EGY13-06	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/17/2013	EGY13-17	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/3/2013	EGY13-03	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
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Serotype: A WRLFMD Ref No: EGY/13/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 7.RL/579 Location: Mashet, Menia, Menia, Middle Egypt, Egypt Date collected: 11/03/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-13.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 days
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4	A/PAT/10/2013	PAT13-10	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/11/2013	PAT13-11	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/12/2013	PAT13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/14/2013	EGY13-14	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/6/2013	EGY13-06	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/17/2013	EGY13-17	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/3/2013	EGY13-03	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	600	0	93.90	6.10	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	599	0	93.74	6.26	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/125/2010	IRN10125	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/15/2012	IRN12-15	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-12</sup>
10	A/IRN/9/2011	IRN11-09	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>OAZ-11</sup>

nt, nucleotides

\*. not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A WRLFMD Ref No: EGY/14/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 22.RL/600 Location: Tanbasha, Berkat Elsabh, Monofia, Delta region, Egypt Date collected: 19/03/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez  Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-14.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/PAT/10/2013	PAT13-10	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/11/2013	PAT13-11	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/12/2013	PAT13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/13/2013	EGY13-13	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/6/2013	EGY13-06	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/17/2013	EGY13-17	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/3/2013	EGY13-03	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	600	0	93.90	6.10	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	599	0	93.74	6.26	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
6	A/TUR/1/2008	TUR08-01	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>ARD-07</sup>
7	A/TUR/33/2008	TUR08-33	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>EZM-07</sup>
8	A/IRN/15/2012	IRN12-15	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A WRLFMD Ref No: EGY/15/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 23.RL/602 Location: Elhoria, Abohamad, Sharkia, Delta region, Egypt Date collected: 20/03/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-15.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/PAT/10/2013	PAT13-10	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/PAT/11/2013	PAT13-11	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/12/2013	PAT13-12	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/EGY/13/2013	EGY13-13	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/14/2013	EGY13-14	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/6/2013	EGY13-06	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/17/2013	EGY13-17	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/3/2013	EGY13-03	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	601	0	94.05	5.95	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/TUR/33/2008	TUR08-33	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>EZM-07</sup>
7	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/15/2012	IRN12-15	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	582	0	91.08	8.92	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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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	Report date: 18/06/2013
WRLFMD Ref No: EGY/17/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00012	Checked by: B. Valdazo-Gonzalez
Sender Ref: 19.RL/659	
Location: Khose, Qena, Upper Egypt, Egypt	Topotype: ASIA
Date collected: 07/04/2013	Genotype/strain: Iran-05 <sup>BAR-08</sup>
Date received by WRLFMD: 29/05/2013	Sequence filename: EGY13-17.SEQ
Date received for sequencing: 14/06/2013	Date sequence last updated: 18/06/2013
Species: Cattle	No. of Nt determined: 639
Material used: BTy2 11/06/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1630
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 20 days
	Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/EGY/6/2013	EGY13-06	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/EGY/5/2013	EGY13-05	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/10/2013	PAT13-10	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/PAT/11/2013	PAT13-11	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/PAT/12/2013	PAT13-12	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/13/2013	EGY13-13	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/14/2013	EGY13-14	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	610	0	95.46	4.54	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	600	0	93.90	6.10	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/1/2008	TUR08-01	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>ARD-07</sup>
6	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
7	A/TUR/33/2008	TUR08-33	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>EZM-07</sup>
8	A/IRN/15/2012	IRN12-15	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/IRN/125/2010	IRN10125	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2011	IRN11-09	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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# FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A WRLFMD Ref No: EGY/19/2013 Batch No: WRLFMD/2013/00012 Sender Ref: 20.RL/656 Location: Elbangar, Elhamam, Matroh, Western Region, Egypt Date collected: 09/04/2013 Date received by WRLFMD: 29/05/2013 Date received for sequencing: 14/06/2013 Species: Cattle Material used: BTy2 11/06/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 18/06/2013 Reported by: N.J. Knowles Checked by: B. Valdazo-Gonzalez Topotype: ASIA Genotype/strain: Iran-05 <sup>BAR-08</sup> Sequence filename: EGY13-19.SEQ Date sequence last updated: 18/06/2013 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1630 Min. no. of nt for comparison: 600 Total turn-around time: 20 days Sequencing time: 4 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/EGY/11/2013	EGY13-11	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/EGY/12/2013	EGY13-12	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
3	A/EGY/15/2013	EGY13-15	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/PAT/10/2013	PAT13-10	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/PAT/11/2013	PAT13-11	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/PAT/12/2013	PAT13-12	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>BAR-08</sup>
7	A/EGY/13/2013	EGY13-13	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>BAR-08</sup>
8	A/EGY/14/2013	EGY13-14	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/EGY/6/2013	EGY13-06	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>BAR-08</sup>
10	A/EGY/17/2013	EGY13-17	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>BAR-08</sup>
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/BAR/6/2008	BAR08-06	639	607	0	94.99	5.01	ASIA	Iran-05 <sup>BAR-08</sup>
2	A/AFG/6/2007	AFG07-06	639	600	0	93.90	6.10	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/1/2005 (EF208769)	IRN05-01	639	599	0	93.74	6.26	ASIA	Iran-05
4	A/IRN/78/2009	IRN09-78	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/TUR/33/2008	TUR08-33	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>EZM-07</sup>
6	A/TUR/1/2008	TUR08-01	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>ARD-07</sup>
7	A/AFG/10/2010	AFG10-10	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>HER-10</sup>
8	A/IRN/125/2010	IRN10125	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/15/2012	IRN12-15	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>SIS-12</sup>
10	A/IRN/9/2011	IRN11-09	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>QAZ-11</sup>

nt, nucleotides


\*, not a WRLFMD reference number

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# Report on FMDV A in Egypt in 2013

Batch: WRLFMD/2013/00012

 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,  
18 June 2013

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