

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

## Genotyping Report

Report Date for this Batch: 7 April 2014

FMDV type A

Country: Iran

Period: 2013-2014

No. of samples: 18

BATCH: WRLFMD/2014/000006



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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: 04/04/2014
WRLFMD Ref No: IRN/18/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-2	
Location: Hamedan, Iran	Topotype: ASIA
Date collected: 14/10/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-18.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 25/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/34/2013	IRN13-34	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/33/2013	IRN13-33	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/8/2014	IRN14-08	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/4/2014	IRN14-04	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/7/2014	IRN14-07	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	616	0	96.40	3.60	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	601	0	94.05	5.95	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	591	0	92.49	7.51	ASIA	Iran-05
7	A/IRN/15/2012	IRN12-15	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>SIS-12</sup>
8	A/IRN/9/2010	IRN10-09	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>ESF-10</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>EZM-07</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/20/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-21	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 12/11/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-20.SEQ
Date received for sequencing: 07/03/2014	Date sequence last updated: 17/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 26/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 28 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/IRN/1/2013	IRN13-01	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/10/2013	IRN13-10	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/24/2012	IRN12-24	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/3/2013	IRN13-03	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/Gods/2012*	IRN12-AD	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/s-001/2012 (IVO)	IRN12S01	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/s-002/2012 (IVO)	IRN12S02	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/s-003/2012 (IVO)	IRN12S03	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/s-004/2012 (IVO)	IRN12S04	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/5/2013	IRN13-05	639	630	0	98.59	1.41	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	613	0	95.93	4.07	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/78/2009	IRN09-78	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/AFG/10/2010	AFG10-10	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>HER-10</sup>
5	A/BAR/6/2008 (FJ755010)	BAR08-06	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	580	0	90.77	9.23	ASIA	Iran-05
7	A/TUR/33/2008 (FJ755155)	TUR08-33	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>EZM-07</sup>
8	A/TUR/1/2008 (FJ755133)	TUR08-01	639	579	0	90.61	9.39	ASIA	Iran-05 <sup>ARD-07</sup>
9	A/IRN/15/2012	IRN12-15	639	577	0	90.30	9.70	ASIA	Iran-05 <sup>SIS-12</sup>
10	A/IRN/1/2011	IRN11-01	639	573	0	89.67	10.33	ASIA	Iran-05 <sup>FAR-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/24/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-6	
Location: Hormozgan, Iran	Topotype: ASIA
Date collected: 05/12/2013	Genotype/strain: Iran-05 <sup>FAR-11</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-24.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Goat	No. of Nt determined: 639
Material used: BTy2 28/02/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/PAK/1/2013	PAK13-01	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/PAK/11/2013	PAK13-11	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>FAR-11</sup>
3	A/PAK/13/2013	PAK13-13	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>FAR-11</sup>
4	A/PAK/14/2013	PAK13-14	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>FAR-11</sup>
5	A/PAK/48/2012	PAK12-48	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>FAR-11</sup>
6	A/PAK/17/2013	PAK13-17	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/PAK/21/2013	PAK13-21	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>FAR-11</sup>
8	A/PAK/25/2013	PAK13-25	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>FAR-11</sup>
9	A/PAK/8/2013	PAK13-08	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>FAR-11</sup>
10	A/PAK/5/2013	PAK13-05	639	631	0	98.75	1.25	ASIA	Iran-05 <sup>FAR-11</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/IRN/1/2011	IRN11-01	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	601	0	94.05	5.95	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/78/2009	IRN09-78	639	597	0	93.43	6.57	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/AFG/10/2010	AFG10-10	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>HER-10</sup>
5	A/IRN/15/2012	IRN12-15	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>SIS-12</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	589	0	92.18	7.82	ASIA	Iran-05
7	A/TUR/1/2008 (FJ755133)	TUR08-01	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>ARD-07</sup>
8	A/BAR/6/2008 (FJ755010)	BAR08-06	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/IRN/125/2010	IRN10125	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2010	IRN10-09	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>ESF-10</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/25/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-14	
Location: Qom, Iran	Topotype: ASIA
Date collected: 05/12/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-25.SEQ
Date received for sequencing: 07/03/2014	Date sequence last updated: 17/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 05/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 28 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/IRN/10/2014	IRN14-10	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/34/2013	IRN13-34	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/5/2014	IRN14-05	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/18/2013	IRN13-18	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/33/2013	IRN13-33	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/8/2014	IRN14-08	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/4/2014	IRN14-04	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/7/2014	IRN14-07	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/9/2014	IRN14-09	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	631	0	98.75	1.25	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	586	0	91.71	8.29	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: IRN/27/2013 Batch No: WRLFMD/2014/00006 Sender Ref: IR-92 A-4 Location: Sistan and Baluchestan, Iran Date collected: 12/12/2013 Date received by WRLFMD: 05/02/2014 Date received for sequencing: 07/03/2014 Species: Cattle Material used: BTy1 06/03/2014 & BTy2 07/03/2014 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 07/04/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska  Topotype: ASIA Genotype/strain: Iran-05 <sup>FAR-09</sup> Sequence filename: IRN13-27.SEQ Date sequence last updated: 17/03/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 1867 Min. no. of nt for comparison: 600 Total turn-around time: 61 days Sequencing time: 31 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/IRN/28/2013	IRN13-28	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>FAR-09</sup>
2	A/SIN/PAK/L574/2009 (HQ439244)	PAK09-AA	639	610	0	95.46	4.54	ASIA	Iran-05 <sup>FAR-09</sup>
3	A/HIR/AFG/L1439/2009 (HQ439278)	AFG09-AQ	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/SIN/PAK/L578/2009 (HQ439245)	PAK09-AB	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/IRN/9/2009	IRN09-09	639	607	0	94.99	5.01	ASIA	Iran-05 <sup>AFG-07</sup>
6	A/IRN/197/2010	IRN10197	639	606	0	94.84	5.16	ASIA	Iran-05 <sup>FAR-09</sup>
7	A/IRN/26/2009	IRN09-26	639	606	0	94.84	5.16	ASIA	Iran-05 <sup>AFG-07</sup>
8	A/AFG/11/2009	AFG09-11	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>FAR-09</sup>
9	A/AFG/9/2009	AFG09-09	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>FAR-09</sup>
10	A/BAR/2/2009	BAR09-02	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>AFG-07</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/AFG/6/2007 (FJ755007)	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
2	A/IRN/78/2009	IRN09-78	639	601	0	94.05	5.95	ASIA	Iran-05 <sup>FAR-09</sup>
3	A/AFG/10/2010	AFG10-10	639	599	0	93.74	6.26	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	639	590	0	92.33	7.67	ASIA	Iran-05
6	A/IRN/1/2011	IRN11-01	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/IRN/125/2010	IRN10125	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/15/2012	IRN12-15	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	581	0	90.92	9.08	ASIA	Iran-05 <sup>EZM-07</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	Report date: 07/04/2014
WRLFMD Ref No: IRN/28/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-28	
Location: Sistan and Baluchestan, Iran	Topotype: ASIA
Date collected: 12/12/2013	Genotype/strain: Iran-05 <sup>FAR-09</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-28.SEQ
Date received for sequencing: 13/03/2014	Date sequence last updated: 17/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 07/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 61 days
	Sequencing time: 25 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/IRN/27/2013	IRN13-27	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>FAR-09</sup>
2	A/SIN/PAK/L574/2009 (HQ439244)	PAK09-AA	639	610	0	95.46	4.54	ASIA	Iran-05 <sup>FAR-09</sup>
3	A/HIR/AFG/L1439/2009 (HQ439278)	AFG09-AQ	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/SIN/PAK/L578/2009 (HQ439245)	PAK09-AB	639	609	0	95.31	4.69	ASIA	Iran-05 <sup>FAR-09</sup>
5	A/IRN/9/2009	IRN09-09	639	607	0	94.99	5.01	ASIA	Iran-05 <sup>AFG-07</sup>
6	A/IRN/197/2010	IRN10197	639	606	0	94.84	5.16	ASIA	Iran-05 <sup>FAR-09</sup>
7	A/IRN/26/2009	IRN09-26	639	606	0	94.84	5.16	ASIA	Iran-05 <sup>AFG-07</sup>
8	A/AFG/11/2009	AFG09-11	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>FAR-09</sup>
9	A/AFG/9/2009	AFG09-09	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>FAR-09</sup>
10	A/BAR/2/2009	BAR09-02	639	605	0	94.68	5.32	ASIA	Iran-05 <sup>AFG-07</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/AFG/6/2007 (FJ755007)	AFG07-06	639	602	0	94.21	5.79	ASIA	Iran-05 <sup>AFG-07</sup>
2	A/IRN/78/2009	IRN09-78	639	601	0	94.05	5.95	ASIA	Iran-05 <sup>FAR-09</sup>
3	A/AFG/10/2010	AFG10-10	639	599	0	93.74	6.26	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/1/2005 (EF208769)	IRN05-01	639	590	0	92.33	7.67	ASIA	Iran-05
6	A/IRN/1/2011	IRN11-01	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/IRN/125/2010	IRN10125	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/15/2012	IRN12-15	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	581	0	90.92	9.08	ASIA	Iran-05 <sup>EZM-07</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/32/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-8	
Location: Semnan, Iran	Topotype: ASIA
Date collected: 26/12/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-32.SEQ
Date received for sequencing: 13/03/2014	Date sequence last updated: 17/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy2 08/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 22 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/IRN/33/2013	IRN13-33	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/34/2013	IRN13-34	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/5/2014	IRN14-05	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/18/2013	IRN13-18	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/8/2014	IRN14-08	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/4/2014	IRN14-04	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/7/2014	IRN14-07	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/9/2014	IRN14-09	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/10/2014	IRN14-10	639	631	0	98.75	1.25	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/25/2013	IRN13-25	639	631	0	98.75	1.25	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	586	0	91.71	8.29	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	582	0	91.08	8.92	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/33/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-7	
Location: Khuzestan, Iran	Topotype: ASIA
Date collected: 28/12/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-33.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 11/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/34/2013	IRN13-34	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/18/2013	IRN13-18	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/8/2014	IRN14-08	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/32/2013	IRN13-32	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/4/2014	IRN14-04	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/7/2014	IRN14-07	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/9/2014	IRN14-09	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/10/2014	IRN14-10	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/25/2013	IRN13-25	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	614	0	96.09	3.91	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	599	0	93.74	6.26	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	589	0	92.18	7.82	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>EZM-07</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/34/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-29	
Location: Esfahan, Iran	Topotype: ASIA
Date collected: 30/12/2013	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN13-34.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 12/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/5/2014	IRN14-05	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/18/2013	IRN13-18	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/33/2013	IRN13-33	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/8/2014	IRN14-08	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/4/2014	IRN14-04	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/7/2014	IRN14-07	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	615	0	96.24	3.76	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	600	0	93.90	6.10	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	590	0	92.33	7.67	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>EZM-07</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/2/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A1	
Location: Alborz, Iran	Topotype: ASIA
Date collected: 06/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-02.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 19/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/1/2013	IRN13-01	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/10/2013	IRN13-10	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/24/2012	IRN12-24	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/3/2013	IRN13-03	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/Gods/2012*	IRN12-AD	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/s-001/2012 (IVO)	IRN12S01	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/s-002/2012 (IVO)	IRN12S02	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/s-003/2012 (IVO)	IRN12S03	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/s-004/2012 (IVO)	IRN12S04	639	623	0	97.50	2.50	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/5/2013	IRN13-05	639	621	0	97.18	2.82	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	606	0	94.84	5.16	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	593	0	92.80	7.20	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/78/2009	IRN09-78	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/AFG/10/2010	AFG10-10	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>HER-10</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	580	0	90.77	9.23	ASIA	Iran-05
7	A/TUR/1/2008 (FJ755133)	TUR08-01	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>ARD-07</sup>
8	A/TUR/33/2008 (FJ755155)	TUR08-33	639	580	0	90.77	9.23	ASIA	Iran-05 <sup>EZM-07</sup>
9	A/IRN/15/2012	IRN12-15	639	576	0	90.14	9.86	ASIA	Iran-05 <sup>SIS-12</sup>
10	A/IRN/1/2011	IRN11-01	639	572	0	89.51	10.49	ASIA	Iran-05 <sup>FAR-11</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/3/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-9	
Location: Markazi, Iran	Topotype: ASIA
Date collected: 06/01/2014	Genotype/strain: Iran-05 <sup>FAR-11</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-03.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 20/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/6/2014	IRN14-06	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/PAK/1/2013	PAK13-01	639	629	0	98.44	1.56	ASIA	Iran-05 <sup>FAR-11</sup>
3	A/PAK/48/2012	PAK12-48	639	629	0	98.44	1.56	ASIA	Iran-05 <sup>FAR-11</sup>
4	A/PAK/19/2013	PAK13-19	639	628	0	98.28	1.72	ASIA	Iran-05 <sup>FAR-11</sup>
5	A/PAK/11/2013	PAK13-11	639	627	0	98.12	1.88	ASIA	Iran-05 <sup>FAR-11</sup>
6	A/PAK/13/2013	PAK13-13	639	627	0	98.12	1.88	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/PAK/14/2013	PAK13-14	639	627	0	98.12	1.88	ASIA	Iran-05 <sup>FAR-11</sup>
8	A/PAK/17/2013	PAK13-17	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</sup>
9	A/PAK/21/2013	PAK13-21	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</sup>
10	A/PAK/25/2013	PAK13-25	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</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/IRN/1/2011	IRN11-01	639	619	0	96.87	3.13	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	599	0	93.74	6.26	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>HER-10</sup>
4	A/IRN/15/2012	IRN12-15	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>SIS-12</sup>
5	A/IRN/78/2009	IRN09-78	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/TUR/1/2008 (FJ755133)	TUR08-01	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>ARD-07</sup>
7	A/IRN/1/2005 (EF208769)	IRN05-01	639	589	0	92.18	7.82	ASIA	Iran-05
8	A/BAR/6/2008 (FJ755010)	BAR08-06	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/IRN/125/2010	IRN10125	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/9/2010	IRN10-09	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ESF-10</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/4/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-12	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 06/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-04.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/34/2013	IRN13-34	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/18/2013	IRN13-18	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/33/2013	IRN13-33	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/8/2014	IRN14-08	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/7/2014	IRN14-07	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	613	0	95.93	4.07	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/9/2010	IRN10-09	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>ESF-10</sup>
7	A/IRN/1/2005 (EF208769)	IRN05-01	639	588	0	92.02	7.98	ASIA	Iran-05
8	A/IRN/15/2012	IRN12-15	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/5/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-11	
Location: Mazandaran, Iran	Topotype: ASIA
Date collected: 06/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-05.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/34/2013	IRN13-34	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/18/2013	IRN13-18	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/33/2013	IRN13-33	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/8/2014	IRN14-08	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/4/2014	IRN14-04	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/7/2014	IRN14-07	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	615	0	96.24	3.76	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	600	0	93.90	6.10	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	590	0	92.33	7.67	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/6/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-17	
Location: Qom, Iran	Topotype: ASIA
Date collected: 12/01/2014	Genotype/strain: Iran-05 <sup>FAR-11</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-06.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 19/03/2014
Species: Bovine	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/3/2014	IRN14-03	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/PAK/1/2013	PAK13-01	639	628	0	98.28	1.72	ASIA	Iran-05 <sup>FAR-11</sup>
3	A/PAK/48/2012	PAK12-48	639	628	0	98.28	1.72	ASIA	Iran-05 <sup>FAR-11</sup>
4	A/PAK/19/2013	PAK13-19	639	627	0	98.12	1.88	ASIA	Iran-05 <sup>FAR-11</sup>
5	A/PAK/11/2013	PAK13-11	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</sup>
6	A/PAK/13/2013	PAK13-13	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/PAK/14/2013	PAK13-14	639	626	0	97.97	2.03	ASIA	Iran-05 <sup>FAR-11</sup>
8	A/PAK/17/2013	PAK13-17	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>FAR-11</sup>
9	A/PAK/21/2013	PAK13-21	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>FAR-11</sup>
10	A/PAK/25/2013	PAK13-25	639	625	0	97.81	2.19	ASIA	Iran-05 <sup>FAR-11</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/IRN/1/2011	IRN11-01	639	618	0	96.71	3.29	ASIA	Iran-05 <sup>FAR-11</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>HER-10</sup>
4	A/IRN/15/2012	IRN12-15	639	595	0	93.11	6.89	ASIA	Iran-05 <sup>SIS-12</sup>
5	A/IRN/78/2009	IRN09-78	639	594	0	92.96	7.04	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/TUR/1/2008 (FJ755133)	TUR08-01	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>ARD-07</sup>
7	A/IRN/1/2005 (EF208769)	IRN05-01	639	588	0	92.02	7.98	ASIA	Iran-05
8	A/BAR/6/2008 (FJ755010)	BAR08-06	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>BAR-08</sup>
9	A/IRN/9/2010	IRN10-09	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>ESF-10</sup>
10	A/IRN/125/2010	IRN10125	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>SIS-10</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	Report date: 04/04/2014
WRLFMD Ref No: IRN/7/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-24	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 14/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-07.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 19/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/34/2013	IRN13-34	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/18/2013	IRN13-18	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/33/2013	IRN13-33	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/8/2014	IRN14-08	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/4/2014	IRN14-04	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	613	0	95.93	4.07	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	598	0	93.58	6.42	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/IRN/78/2009	IRN09-78	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>FAR-09</sup>
4	A/AFG/10/2010	AFG10-10	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>HER-10</sup>
5	A/BAR/6/2008 (FJ755010)	BAR08-06	639	590	0	92.33	7.67	ASIA	Iran-05 <sup>BAR-08</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	590	0	92.33	7.67	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

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Serotype: A	Report date: 04/04/2014
WRLFMD Ref No: IRN/8/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-25	
Location: Alborz, Iran	Topotype: ASIA
Date collected: 14/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-08.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 19/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/34/2013	IRN13-34	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	638	0	99.84	0.16	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/18/2013	IRN13-18	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/33/2013	IRN13-33	639	637	0	99.69	0.31	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/4/2014	IRN14-04	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/7/2014	IRN14-07	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/9/2014	IRN14-09	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	614	0	96.09	3.91	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	599	0	93.74	6.26	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	592	0	92.64	7.36	ASIA	Iran-05 <sup>BAR-08</sup>
4	A/AFG/10/2010	AFG10-10	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>HER-10</sup>
5	A/IRN/78/2009	IRN09-78	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	589	0	92.18	7.82	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>EZM-07</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: 04/04/2014
WRLFMD Ref No: IRN/9/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-20	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 15/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-09.SEQ
Date received for sequencing: 18/03/2014	Date sequence last updated: 20/03/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 17 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/IRN/34/2013	IRN13-34	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/5/2014	IRN14-05	639	636	0	99.53	0.47	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/18/2013	IRN13-18	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/33/2013	IRN13-33	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/8/2014	IRN14-08	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/4/2014	IRN14-04	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/7/2014	IRN14-07	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/10/2014	IRN14-10	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/25/2013	IRN13-25	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	612	0	95.77	4.23	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	597	0	93.43	6.57	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	591	0	92.49	7.51	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	589	0	92.18	7.82	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/15/2012	IRN12-15	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>SIS-12</sup>
7	A/IRN/1/2005 (EF208769)	IRN05-01	639	587	0	91.86	8.14	ASIA	Iran-05
8	A/IRN/9/2010	IRN10-09	639	587	0	91.86	8.14	ASIA	Iran-05 <sup>ESF-10</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>EZM-07</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: 04/04/2014
WRLFMD Ref No: IRN/10/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: IR-92 A-16	
Location: Qom, Iran	Topotype: ASIA
Date collected: 15/01/2014	Genotype/strain: Iran-05 <sup>SIS-10</sup>
Date received by WRLFMD: 05/02/2014	Sequence filename: IRN14-10.SEQ
Date received for sequencing: 02/04/2014	Date sequence last updated: 03/04/2014
Species: Bovine	No. of Nt determined: 639
Material used: BTy1 13/03/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1867
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 58 days
	Sequencing time: 2 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/IRN/25/2013	IRN13-25	639	639	0	100.00	0.00	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/IRN/34/2013	IRN13-34	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
3	A/IRN/5/2014	IRN14-05	639	635	0	99.37	0.63	ASIA	Iran-05 <sup>SIS-10</sup>
4	A/IRN/18/2013	IRN13-18	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
5	A/IRN/33/2013	IRN13-33	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
6	A/IRN/8/2014	IRN14-08	639	634	0	99.22	0.78	ASIA	Iran-05 <sup>SIS-10</sup>
7	A/IRN/4/2014	IRN14-04	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
8	A/IRN/7/2014	IRN14-07	639	633	0	99.06	0.94	ASIA	Iran-05 <sup>SIS-10</sup>
9	A/IRN/9/2014	IRN14-09	639	632	0	98.90	1.10	ASIA	Iran-05 <sup>SIS-10</sup>
10	A/IRN/32/2013	IRN13-32	639	631	0	98.75	1.25	ASIA	Iran-05 <sup>SIS-10</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/IRN/125/2010	IRN10125	639	611	0	95.62	4.38	ASIA	Iran-05 <sup>SIS-10</sup>
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	596	0	93.27	6.73	ASIA	Iran-05 <sup>AFG-07</sup>
3	A/AFG/10/2010	AFG10-10	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>HER-10</sup>
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>BAR-08</sup>
5	A/IRN/78/2009	IRN09-78	639	588	0	92.02	7.98	ASIA	Iran-05 <sup>FAR-09</sup>
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	586	0	91.71	8.29	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	586	0	91.71	8.29	ASIA	Iran-05 <sup>ESF-10</sup>
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 <sup>SIS-12</sup>
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 <sup>ARD-07</sup>
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	583	0	91.24	8.76	ASIA	Iran-05 <sup>EZM-07</sup>

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.1

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# Report on FMDV A in Iran in 2013-2014

Batch: WRLFMD/2014/00006

◆ indicates viruses in this batch

Software: MEGA 6.06

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, J. Wadsworth & K. Bachanek-Bankowska,  
07 April 2014

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