

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

Genotyping Report

Report Date for this Batch: 15 February 2016

FMDV type A

Country: Iran

Period: 2015

No. of samples: 15

BATCH: WRLFMD/2015/00031

Note: An interim genotyping report was previously issued for A/IRN/8/2015 and A/IRN/12/2015 on 04/12/2015.



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/5/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-05	
Location: Ardebil, Iran	Topotype: ASIA
Date collected: 25/05/2015	Genotype/strain: Iran-05 ^{FAR-09}
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-05.SEQ
Date received for sequencing: 02/12/2015	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 25/11/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 73 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/32/2014	PAK14-32	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-09}
2	A/PAK/9/2015	PAK15-09	639	632	0	98.90	1.10	ASIA	Iran-05 ^{FAR-09}
3	A/PAK/10/2014	PAK14-10	639	630	0	98.59	1.41	ASIA	Iran-05 ^{FAR-09}
4	A/PAK/14/2014 (B)	PAK14B14	639	630	0	98.59	1.41	ASIA	Iran-05 ^{FAR-09}
5	A/IRN/27/2013	IRN13-27	639	627	0	98.12	1.88	ASIA	Iran-05 ^{FAR-09}
6	A/IRN/28/2013	IRN13-28	639	627	0	98.12	1.88	ASIA	Iran-05 ^{FAR-09}
7	A/PAK/42/2014	PAK14-42	639	626	0	97.97	2.03	ASIA	Iran-05 ^{FAR-09}
8	A/PAK/38/2014	PAK14-38	639	625	0	97.81	2.19	ASIA	Iran-05 ^{FAR-09}
9	A/PAK/8/2014	PAK14-08	639	625	0	97.81	2.19	ASIA	Iran-05 ^{FAR-09}
10	A/PAK/7/2015	PAK15-07	639	624	0	97.65	2.35	ASIA	Iran-05 ^{FAR-09}
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/AFG/6/2007 (FJ755007)	AFG07-06	639	595	0	93.11	6.89	ASIA	Iran-05 ^{AFG-07}
2	A/AFG/10/2010	AFG10-10	639	594	0	92.96	7.04	ASIA	Iran-05 ^{HER-10}
3	A/IRN/78/2009	IRN09-78	639	594	0	92.96	7.04	ASIA	Iran-05 ^{FAR-09}
4	A/IRN/1/2011	IRN11-01	639	587	0	91.86	8.14	ASIA	Iran-05 ^{FAR-11}
5	A/BAR/6/2008 (FJ755010)	BAR08-06	639	586	0	91.71	8.29	ASIA	Iran-05 ^{BAR-08}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	586	0	91.71	8.29	ASIA	Iran-05
7	A/IRN/125/2010	IRN10125	639	582	0	91.08	8.92	ASIA	Iran-05 ^{SIS-10}
8	A/TUR/1/2008 (FJ755133)	TUR08-01	639	581	0	90.92	9.08	ASIA	Iran-05 ^{ARD-07}
9	A/IRN/15/2012	IRN12-15	639	579	0	90.61	9.39	ASIA	Iran-05 ^{SIS-12}
10	A/IRN/9/2010	IRN10-09	639	577	0	90.30	9.70	ASIA	Iran-05 ^{ESF-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/8/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-16	
Location: Qom, Iran	Topotype: ASIA
Date collected: 30/08/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-08.SEQ
Date received for sequencing: 02/12/2015	Date sequence last updated: 03/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 26/11/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 73 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/22/2015	IRN15-22	639	637	0	99.69	0.31	ASIA	G-VII
2	A/IRN/17/2015	IRN15-17	639	636	0	99.53	0.47	ASIA	G-VII
3	A/IRN/18/2015	IRN15-18	639	636	0	99.53	0.47	ASIA	G-VII
4	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	634	0	99.22	0.78	ASIA	G-VII
5	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	634	0	99.22	0.78	ASIA	G-VII
6	A/IRN/21/2015	IRN15-21	639	634	0	99.22	0.78	ASIA	G-VII
7	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	633	0	99.06	0.94	ASIA	G-VII
8	A/IRN/12/2015	IRN15-12	639	633	0	99.06	0.94	ASIA	G-VII
9	A/IRN/13/2015	IRN15-13	639	633	0	99.06	0.94	ASIA	G-VII
10	A/IRN/14/2015	IRN15-14	639	633	0	99.06	0.94	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	573	0	89.67	10.33	ASIA	G-VII
2	A/IRN/1/96 (EF208771)	IRN96-01	638	539	1	84.48	15.52	ASIA	Iran-96
3	A22/IRQ/64 (AY593763)	IRQ64--A	639	539	0	84.35	15.65	ASIA	A ₂₂
4	A/IRN/2/87 (EF208770)	IRN87-02	636	532	0	83.65	16.35	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	532	0	83.26	16.74	EURO-SA	A ₁₂
6	A/IRN/22/99 (EF208772)	IRN99-22	636	525	0	82.55	17.45	ASIA	Iran-99
7	A/IRN/9/2011	IRN11-09	639	527	0	82.47	17.53	ASIA	Iran-05 ^{QAZ-11}
8	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	527	0	82.47	17.53	ASIA	A15
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	525	0	82.16	17.84	ASIA	Iran-05 ^{ARD-07}
10	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/9/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-08	
Location: Markazy, Iran	Topotype: ASIA
Date collected: 12/09/2015	Genotype/strain: Iran-05 ^{SIS-10}
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-09.SEQ
Date received for sequencing: 02/12/2015	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 26/11/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 73 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/19/2015	IRN15-19	639	639	0	100.00	0.00	ASIA	Iran-05 ^{SIS-10}
2	A/IRN/10/2015	IRN15-10	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
3	A/TUR/14/2015	TUR15-14	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
4	A/IRN/24/2015	IRN15-24	639	634	0	99.22	0.78	ASIA	Iran-05 ^{SIS-10}
5	A/IRN/34/2013	IRN13-34	639	630	0	98.59	1.41	ASIA	Iran-05 ^{SIS-10}
6	A/IRN/5/2014	IRN14-05	639	630	0	98.59	1.41	ASIA	Iran-05 ^{SIS-10}
7	A/IRN/18/2013	IRN13-18	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
8	A/IRN/33/2013	IRN13-33	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
9	A/IRN/8/2014	IRN14-08	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
10	A/IRN/10/2014	IRN14-10	639	628	0	98.28	1.72	ASIA	Iran-05 ^{SIS-10}
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/IRN/125/2010	IRN10125	639	608	0	95.15	4.85	ASIA	Iran-05 ^{SIS-10}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	598	0	93.58	6.42	ASIA	Iran-05 ^{AFG-07}
3	A/AFG/10/2010	AFG10-10	639	592	0	92.64	7.36	ASIA	Iran-05 ^{HER-10}
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	591	0	92.49	7.51	ASIA	Iran-05 ^{BAR-08}
5	A/IRN/78/2009	IRN09-78	639	590	0	92.33	7.67	ASIA	Iran-05 ^{FAR-09}
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	586	0	91.71	8.29	ASIA	Iran-05 ^{ESF-10}
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 ^{SIS-12}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	584	0	91.39	8.61	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/10/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-09	
Location: East Azerbaijan, Iran	Topotype: ASIA
Date collected: 12/09/2015	Genotype/strain: Iran-05 ^{SIS-10}
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-10.SEQ
Date received for sequencing: 02/12/2015	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 26/11/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 73 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/TUR/14/2015	TUR15-14	639	639	0	100.00	0.00	ASIA	Iran-05 ^{SIS-10}
2	A/IRN/19/2015	IRN15-19	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
3	A/IRN/9/2015	IRN15-09	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
4	A/IRN/24/2015	IRN15-24	639	636	0	99.53	0.47	ASIA	Iran-05 ^{SIS-10}
5	A/IRN/34/2013	IRN13-34	639	632	0	98.90	1.10	ASIA	Iran-05 ^{SIS-10}
6	A/IRN/5/2014	IRN14-05	639	632	0	98.90	1.10	ASIA	Iran-05 ^{SIS-10}
7	A/IRN/18/2013	IRN13-18	639	631	0	98.75	1.25	ASIA	Iran-05 ^{SIS-10}
8	A/IRN/33/2013	IRN13-33	639	631	0	98.75	1.25	ASIA	Iran-05 ^{SIS-10}
9	A/IRN/8/2014	IRN14-08	639	631	0	98.75	1.25	ASIA	Iran-05 ^{SIS-10}
10	A/IRN/10/2014	IRN14-10	639	630	0	98.59	1.41	ASIA	Iran-05 ^{SIS-10}
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/IRN/125/2010	IRN10125	639	610	0	95.46	4.54	ASIA	Iran-05 ^{SIS-10}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	596	0	93.27	6.73	ASIA	Iran-05 ^{AFG-07}
3	A/AFG/10/2010	AFG10-10	639	590	0	92.33	7.67	ASIA	Iran-05 ^{HER-10}
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	589	0	92.18	7.82	ASIA	Iran-05 ^{BAR-08}
5	A/IRN/78/2009	IRN09-78	639	588	0	92.02	7.98	ASIA	Iran-05 ^{FAR-09}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	587	0	91.86	8.14	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	586	0	91.71	8.29	ASIA	Iran-05 ^{ESF-10}
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 ^{SIS-12}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	582	0	91.08	8.92	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	582	0	91.08	8.92	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: IRN/12/2015 Batch No: WRLFMD/2015/00031 Sender Ref: IR-94-20 Location: Qom, Iran Date collected: 26/09/2015 Date received by WRLFMD: 20/11/2015 Date received for sequencing: 02/12/2015 Species: Cattle Material used: BTy1 27/11/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 13/02/2016 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: G-VII Sequence filename: IRN15-12.SEQ Date sequence last updated: 03/12/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2115 Min. no. of nt for comparison: 600 Total turn-around time: 85 days Sequencing time: 73 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/25/2015	IRN15-25	639	639	0	100.00	0.00	ASIA	G-VII
2	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	638	0	99.84	0.16	ASIA	G-VII
3	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	638	0	99.84	0.16	ASIA	G-VII
4	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	637	0	99.69	0.31	ASIA	G-VII
5	A/IRN/27/2015	IRN15-27	639	637	0	99.69	0.31	ASIA	G-VII
6	A/IRN/13/2015	IRN15-13	639	635	0	99.37	0.63	ASIA	G-VII
7	A/IRN/14/2015	IRN15-14	639	635	0	99.37	0.63	ASIA	G-VII
8	A/IRN/22/2015	IRN15-22	639	635	0	99.37	0.63	ASIA	G-VII
9	A/Van/TUR/203/2015* (FMDI)	TUR15-AA	639	635	0	99.37	0.63	ASIA	G-VII
10	A/IRN/17/2015	IRN15-17	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	542	0	84.82	15.18	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	541	1	84.80	15.20	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	531	0	83.49	16.51	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	531	0	83.10	16.90	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	530	0	82.94	17.06	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	526	0	82.70	17.30	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	528	0	82.63	17.37	ASIA	Iran-05 ^{QAZ-11}
9	A/AFG/10/2010	AFG10-10	639	524	0	82.00	18.00	ASIA	Iran-05 ^{HER-10}
10	A/TUR/1/2008 (FJ755133)	TUR08-01	639	524	0	82.00	18.00	ASIA	Iran-05 ^{ARD-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/13/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-11	
Location: Qom, Iran	Topotype: ASIA
Date collected: 28/09/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-13.SEQ
Date received for sequencing: 09/12/2015	Date sequence last updated: 10/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 03/12/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 66 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/14/2015	IRN15-14	639	639	0	100.00	0.00	ASIA	G-VII
2	A/IRN/27/2015	IRN15-27	639	637	0	99.69	0.31	ASIA	G-VII
3	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	636	0	99.53	0.47	ASIA	G-VII
4	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	636	0	99.53	0.47	ASIA	G-VII
5	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	635	0	99.37	0.63	ASIA	G-VII
6	A/IRN/12/2015	IRN15-12	639	635	0	99.37	0.63	ASIA	G-VII
7	A/IRN/22/2015	IRN15-22	639	635	0	99.37	0.63	ASIA	G-VII
8	A/IRN/25/2015	IRN15-25	639	635	0	99.37	0.63	ASIA	G-VII
9	A/IRN/17/2015	IRN15-17	639	634	0	99.22	0.78	ASIA	G-VII
10	A/IRN/18/2015	IRN15-18	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	543	0	84.98	15.02	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	540	1	84.64	15.36	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	532	0	83.65	16.35	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	530	0	82.94	17.06	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	527	0	82.47	17.53	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	523	0	82.23	17.77	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	525	0	82.16	17.84	ASIA	Iran-05 ^{QAZ-11}
9	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}
10	A/IRN/125/2010	IRN10125	639	523	0	81.85	18.15	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/14/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-17	
Location: Qom, Iran	Topotype: ASIA
Date collected: 28/09/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-14.SEQ
Date received for sequencing: 09/12/2015	Date sequence last updated: 10/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 03/12/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 days
	Sequencing time: 66 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/13/2015	IRN15-13	639	639	0	100.00	0.00	ASIA	G-VII
2	A/IRN/27/2015	IRN15-27	639	637	0	99.69	0.31	ASIA	G-VII
3	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	636	0	99.53	0.47	ASIA	G-VII
4	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	636	0	99.53	0.47	ASIA	G-VII
5	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	635	0	99.37	0.63	ASIA	G-VII
6	A/IRN/12/2015	IRN15-12	639	635	0	99.37	0.63	ASIA	G-VII
7	A/IRN/22/2015	IRN15-22	639	635	0	99.37	0.63	ASIA	G-VII
8	A/IRN/25/2015	IRN15-25	639	635	0	99.37	0.63	ASIA	G-VII
9	A/IRN/17/2015	IRN15-17	639	634	0	99.22	0.78	ASIA	G-VII
10	A/IRN/18/2015	IRN15-18	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	543	0	84.98	15.02	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	540	1	84.64	15.36	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	532	0	83.65	16.35	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	530	0	82.94	17.06	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	527	0	82.47	17.53	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	523	0	82.23	17.77	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	525	0	82.16	17.84	ASIA	Iran-05 ^{QAZ-11}
9	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}
10	A/IRN/125/2010	IRN10125	639	523	0	81.85	18.15	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: IRN/17/2015 Batch No: WRLFMD/2015/00031 Sender Ref: IR-94-23 Location: Qom, Iran Date collected: 09/10/2015 Date received by WRLFMD: 20/11/2015 Date received for sequencing: 11/12/2015 Species: Cattle Material used: BTy2 08/12/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 13/02/2016 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: G-VII Sequence filename: IRN15-17.SEQ Date sequence last updated: 15/12/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2115 Min. no. of nt for comparison: 600 Total turn-around time: 85 days Sequencing time: 64 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/22/2015	IRN15-22	639	638	0	99.84	0.16	ASIA	G-VII
2	A/IRN/18/2015	IRN15-18	639	637	0	99.69	0.31	ASIA	G-VII
3	A/IRN/8/2015	IRN15-08	639	636	0	99.53	0.47	ASIA	G-VII
4	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	635	0	99.37	0.63	ASIA	G-VII
5	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	635	0	99.37	0.63	ASIA	G-VII
6	A/IRN/21/2015	IRN15-21	639	635	0	99.37	0.63	ASIA	G-VII
7	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	634	0	99.22	0.78	ASIA	G-VII
8	A/IRN/12/2015	IRN15-12	639	634	0	99.22	0.78	ASIA	G-VII
9	A/IRN/13/2015	IRN15-13	639	634	0	99.22	0.78	ASIA	G-VII
10	A/IRN/14/2015	IRN15-14	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	574	0	89.83	10.17	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	540	0	84.51	15.49	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	538	1	84.33	15.67	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	533	0	83.81	16.19	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	531	0	83.10	16.90	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	528	0	82.63	17.37	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	524	0	82.39	17.61	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	526	0	82.32	17.68	ASIA	Iran-05 ^{QAZ-11}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	524	0	82.00	18.00	ASIA	Iran-05 ^{ARD-07}
10	A/AFG/10/2010	AFG10-10	639	522	0	81.69	18.31	ASIA	Iran-05 ^{HER-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/18/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-10	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 10/10/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-18.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 27/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/22/2015	IRN15-22	639	638	0	99.84	0.16	ASIA	G-VII
2	A/IRN/17/2015	IRN15-17	639	637	0	99.69	0.31	ASIA	G-VII
3	A/IRN/8/2015	IRN15-08	639	636	0	99.53	0.47	ASIA	G-VII
4	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	635	0	99.37	0.63	ASIA	G-VII
5	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	635	0	99.37	0.63	ASIA	G-VII
6	A/IRN/21/2015	IRN15-21	639	635	0	99.37	0.63	ASIA	G-VII
7	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	634	0	99.22	0.78	ASIA	G-VII
8	A/IRN/12/2015	IRN15-12	639	634	0	99.22	0.78	ASIA	G-VII
9	A/IRN/13/2015	IRN15-13	639	634	0	99.22	0.78	ASIA	G-VII
10	A/IRN/14/2015	IRN15-14	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	574	0	89.83	10.17	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	540	0	84.51	15.49	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	538	1	84.33	15.67	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	533	0	83.81	16.19	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	531	0	83.10	16.90	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	528	0	82.63	17.37	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	524	0	82.39	17.61	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	526	0	82.32	17.68	ASIA	Iran-05 ^{QAZ-11}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	524	0	82.00	18.00	ASIA	Iran-05 ^{ARD-07}
10	A/AFG/10/2010	AFG10-10	639	522	0	81.69	18.31	ASIA	Iran-05 ^{HER-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/19/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-15	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 15/10/2015	Genotype/strain: Iran-05 ^{SIS-10}
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-19.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 27/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/9/2015	IRN15-09	639	639	0	100.00	0.00	ASIA	Iran-05 ^{SIS-10}
2	A/IRN/10/2015	IRN15-10	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
3	A/TUR/14/2015	TUR15-14	639	637	0	99.69	0.31	ASIA	Iran-05 ^{SIS-10}
4	A/IRN/24/2015	IRN15-24	639	634	0	99.22	0.78	ASIA	Iran-05 ^{SIS-10}
5	A/IRN/34/2013	IRN13-34	639	630	0	98.59	1.41	ASIA	Iran-05 ^{SIS-10}
6	A/IRN/5/2014	IRN14-05	639	630	0	98.59	1.41	ASIA	Iran-05 ^{SIS-10}
7	A/IRN/18/2013	IRN13-18	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
8	A/IRN/33/2013	IRN13-33	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
9	A/IRN/8/2014	IRN14-08	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
10	A/IRN/10/2014	IRN14-10	639	628	0	98.28	1.72	ASIA	Iran-05 ^{SIS-10}
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/IRN/125/2010	IRN10125	639	608	0	95.15	4.85	ASIA	Iran-05 ^{SIS-10}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	598	0	93.58	6.42	ASIA	Iran-05 ^{AFG-07}
3	A/AFG/10/2010	AFG10-10	639	592	0	92.64	7.36	ASIA	Iran-05 ^{HER-10}
4	A/BAR/6/2008 (FJ755010)	BAR08-06	639	591	0	92.49	7.51	ASIA	Iran-05 ^{BAR-08}
5	A/IRN/78/2009	IRN09-78	639	590	0	92.33	7.67	ASIA	Iran-05 ^{FAR-09}
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	586	0	91.71	8.29	ASIA	Iran-05 ^{ESF-10}
8	A/IRN/15/2012	IRN12-15	639	585	0	91.55	8.45	ASIA	Iran-05 ^{SIS-12}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	584	0	91.39	8.61	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	584	0	91.39	8.61	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/21/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-24	
Location: Qom, Iran	Topotype: ASIA
Date collected: 24/10/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-21.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 28/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/22/2015	IRN15-22	639	636	0	99.53	0.47	ASIA	G-VII
2	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	635	0	99.37	0.63	ASIA	G-VII
3	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	635	0	99.37	0.63	ASIA	G-VII
4	A/IRN/17/2015	IRN15-17	639	635	0	99.37	0.63	ASIA	G-VII
5	A/IRN/18/2015	IRN15-18	639	635	0	99.37	0.63	ASIA	G-VII
6	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	634	0	99.22	0.78	ASIA	G-VII
7	A/IRN/12/2015	IRN15-12	639	634	0	99.22	0.78	ASIA	G-VII
8	A/IRN/13/2015	IRN15-13	639	634	0	99.22	0.78	ASIA	G-VII
9	A/IRN/14/2015	IRN15-14	639	634	0	99.22	0.78	ASIA	G-VII
10	A/IRN/25/2015	IRN15-25	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	541	0	84.66	15.34	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	539	1	84.48	15.52	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	532	0	83.65	16.35	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	532	0	83.26	16.74	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	530	0	82.94	17.06	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	525	0	82.55	17.45	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	527	0	82.47	17.53	ASIA	Iran-05 ^{QAZ-11}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	525	0	82.16	17.84	ASIA	Iran-05 ^{ARD-07}
10	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/22/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-25	
Location: Tehran, Iran	Topotype: ASIA
Date collected: 24/10/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-22.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 28/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/17/2015	IRN15-17	639	638	0	99.84	0.16	ASIA	G-VII
2	A/IRN/18/2015	IRN15-18	639	638	0	99.84	0.16	ASIA	G-VII
3	A/IRN/8/2015	IRN15-08	639	637	0	99.69	0.31	ASIA	G-VII
4	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	636	0	99.53	0.47	ASIA	G-VII
5	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	636	0	99.53	0.47	ASIA	G-VII
6	A/IRN/21/2015	IRN15-21	639	636	0	99.53	0.47	ASIA	G-VII
7	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	635	0	99.37	0.63	ASIA	G-VII
8	A/IRN/12/2015	IRN15-12	639	635	0	99.37	0.63	ASIA	G-VII
9	A/IRN/13/2015	IRN15-13	639	635	0	99.37	0.63	ASIA	G-VII
10	A/IRN/14/2015	IRN15-14	639	635	0	99.37	0.63	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	541	0	84.66	15.34	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	539	1	84.48	15.52	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	534	0	83.96	16.04	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	532	0	83.26	16.74	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	529	0	82.79	17.21	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	525	0	82.55	17.45	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	527	0	82.47	17.53	ASIA	Iran-05 ^{QAZ-11}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	525	0	82.16	17.84	ASIA	Iran-05 ^{ARD-07}
10	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/24/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-19	
Location: Qom, Iran	Topotype: ASIA
Date collected: 26/10/2015	Genotype/strain: Iran-05 ^{SIS-10}
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-24.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 28/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/10/2015	IRN15-10	639	636	0	99.53	0.47	ASIA	Iran-05 ^{SIS-10}
2	A/TUR/14/2015	TUR15-14	639	636	0	99.53	0.47	ASIA	Iran-05 ^{SIS-10}
3	A/IRN/19/2015	IRN15-19	639	634	0	99.22	0.78	ASIA	Iran-05 ^{SIS-10}
4	A/IRN/9/2015	IRN15-09	639	634	0	99.22	0.78	ASIA	Iran-05 ^{SIS-10}
5	A/IRN/34/2013	IRN13-34	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
6	A/IRN/5/2014	IRN14-05	639	629	0	98.44	1.56	ASIA	Iran-05 ^{SIS-10}
7	A/IRN/18/2013	IRN13-18	639	628	0	98.28	1.72	ASIA	Iran-05 ^{SIS-10}
8	A/IRN/33/2013	IRN13-33	639	628	0	98.28	1.72	ASIA	Iran-05 ^{SIS-10}
9	A/IRN/8/2014	IRN14-08	639	628	0	98.28	1.72	ASIA	Iran-05 ^{SIS-10}
10	A/IRN/10/2014	IRN14-10	639	627	0	98.12	1.88	ASIA	Iran-05 ^{SIS-10}
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/IRN/125/2010	IRN10125	639	607	0	94.99	5.01	ASIA	Iran-05 ^{SIS-10}
2	A/AFG/6/2007 (FJ755007)	AFG07-06	639	593	0	92.80	7.20	ASIA	Iran-05 ^{AFG-07}
3	A/BAR/6/2008 (FJ755010)	BAR08-06	639	588	0	92.02	7.98	ASIA	Iran-05 ^{BAR-08}
4	A/AFG/10/2010	AFG10-10	639	587	0	91.86	8.14	ASIA	Iran-05 ^{HER-10}
5	A/IRN/78/2009	IRN09-78	639	585	0	91.55	8.45	ASIA	Iran-05 ^{FAR-09}
6	A/IRN/1/2005 (EF208769)	IRN05-01	639	584	0	91.39	8.61	ASIA	Iran-05
7	A/IRN/9/2010	IRN10-09	639	583	0	91.24	8.76	ASIA	Iran-05 ^{ESF-10}
8	A/IRN/15/2012	IRN12-15	639	582	0	91.08	8.92	ASIA	Iran-05 ^{SIS-12}
9	A/TUR/1/2008 (FJ755133)	TUR08-01	639	581	0	90.92	9.08	ASIA	Iran-05 ^{ARD-07}
10	A/TUR/33/2008 (FJ755155)	TUR08-33	639	581	0	90.92	9.08	ASIA	Iran-05 ^{EZM-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/25/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-21	
Location: East Azerbaijan, Iran	Topotype: ASIA
Date collected: 28/10/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-25.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 29/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/12/2015	IRN15-12	639	639	0	100.00	0.00	ASIA	G-VII
2	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	638	0	99.84	0.16	ASIA	G-VII
3	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	638	0	99.84	0.16	ASIA	G-VII
4	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	637	0	99.69	0.31	ASIA	G-VII
5	A/IRN/27/2015	IRN15-27	639	637	0	99.69	0.31	ASIA	G-VII
6	A/IRN/13/2015	IRN15-13	639	635	0	99.37	0.63	ASIA	G-VII
7	A/IRN/14/2015	IRN15-14	639	635	0	99.37	0.63	ASIA	G-VII
8	A/IRN/22/2015	IRN15-22	639	635	0	99.37	0.63	ASIA	G-VII
9	A/Van/TUR/203/2015* (FMDI)	TUR15-AA	639	635	0	99.37	0.63	ASIA	G-VII
10	A/IRN/17/2015	IRN15-17	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	542	0	84.82	15.18	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	541	1	84.80	15.20	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	531	0	83.49	16.51	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	531	0	83.10	16.90	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	530	0	82.94	17.06	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	526	0	82.70	17.30	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	528	0	82.63	17.37	ASIA	Iran-05 ^{QAZ-11}
9	A/AFG/10/2010	AFG10-10	639	524	0	82.00	18.00	ASIA	Iran-05 ^{HER-10}
10	A/TUR/1/2008 (FJ755133)	TUR08-01	639	524	0	82.00	18.00	ASIA	Iran-05 ^{ARD-07}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 13/02/2016
WRLFMD Ref No: IRN/27/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00031	Checked by: D.P. King
Sender Ref: IR-94-27	
Location: Kermanshah, Iran	Topotype: ASIA
Date collected: 08/11/2015	Genotype/strain: G-VII
Date received by WRLFMD: 20/11/2015	Sequence filename: IRN15-27.SEQ
Date received for sequencing: 11/02/2016	Date sequence last updated: 15/12/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTY1 29/01/2016	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2115
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 85 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/ARM/1/2015 (ARRIAH)	ARM15-AA	639	638	0	99.84	0.16	ASIA	G-VII
2	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	638	0	99.84	0.16	ASIA	G-VII
3	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	637	0	99.69	0.31	ASIA	G-VII
4	A/IRN/12/2015	IRN15-12	639	637	0	99.69	0.31	ASIA	G-VII
5	A/IRN/13/2015	IRN15-13	639	637	0	99.69	0.31	ASIA	G-VII
6	A/IRN/14/2015	IRN15-14	639	637	0	99.69	0.31	ASIA	G-VII
7	A/IRN/25/2015	IRN15-25	639	637	0	99.69	0.31	ASIA	G-VII
8	A/IRN/22/2015	IRN15-22	639	635	0	99.37	0.63	ASIA	G-VII
9	A/Van/TUR/203/2015* (FMDI)	TUR15-AA	639	635	0	99.37	0.63	ASIA	G-VII
10	A/IRN/17/2015	IRN15-17	639	634	0	99.22	0.78	ASIA	G-VII
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/IND/40/2000* (1999;AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	544	0	85.13	14.87	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	542	1	84.95	15.05	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	533	0	83.81	16.19	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	531	0	83.10	16.90	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	528	0	82.63	17.37	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	524	0	82.39	17.61	ASIA	Iran-99
8	A/IRN/9/2011	IRN11-09	639	526	0	82.32	17.68	ASIA	Iran-05 ^{QAZ-11}
9	A/AFG/10/2010	AFG10-10	639	524	0	82.00	18.00	ASIA	Iran-05 ^{HER-10}
10	A/IRN/125/2010	IRN10125	639	524	0	82.00	18.00	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Iran in 2015

Batch: WRLFMD/2015/00031

◆ 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,
15 February 2016

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