

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

Genotyping Report v2

Report Date for this Batch: 28 July 2015

FMDV type O

Country: Afghanistan

Period: 2013-2014

No. of samples: 12

BATCH: WRLFMD/2015/00003

Now including the sequence of AFG/10/2014 which was originally reported as FMDV-GD.



The contents of this report are copyright and should not be reproduced without permission

© The Pirbright Institute

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O WRLFMD Ref No: AFG/23/2013 Batch No: WRLFMD/2015/00003 Sender Ref: 6159 Location: Ghoren, Herat, Afghanistan Date collected: 18/12/2013 Date received by WRLFMD: 31/03/2015 Date received for sequencing: 30/04/2015 Species: Cattle Material used: BTy1 08/04/2015 & BTy2 18/04/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 14/07/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{ANT-10} Sequence filename: AFG13-23.SEQ Date sequence last updated: 07/05/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4150 Min. no. of nt for comparison: 600 Total turn-around time: 105 days Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/27/2013	AFG13-27	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/9/2014	AFG14-09	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/23/2014	PAK14-23	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/58/2012	PAK12-58	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/12/2014	PAK14-12	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/2/2014	PAK14-02	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/26/2013	PAK13-26	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/27/2013	PAK13-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/3/2014	PAK14-03	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/3/2014	AFG14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	608	0	95.15	4.85	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	593	0	92.80	7.20	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	589	0	92.18	7.82	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	586	0	91.71	8.29	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	581	0	90.92	9.08	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c

nt, nucleotides

* , not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O WRLFMD Ref No: AFG/27/2013 Batch No: WRLFMD/2015/00003 Sender Ref: 6158 Location: Zande Jan, Herat, Afghanistan Date collected: 28/12/2013 Date received by WRLFMD: 31/03/2015 Date received for sequencing: 30/04/2015 Species: Cattle Material used: BTy1 09/04/2015 & BTy2 18/04/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 14/07/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{ANT-10} Sequence filename: AFG13-27.SEQ Date sequence last updated: 07/05/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4150 Min. no. of nt for comparison: 600 Total turn-around time: 105 days Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/23/2013	AFG13-23	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/9/2014	AFG14-09	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/23/2014	PAK14-23	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/58/2012	PAK12-58	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/12/2014	PAK14-12	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/2/2014	PAK14-02	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/26/2013	PAK13-26	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/27/2013	PAK13-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/3/2014	PAK14-03	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/3/2014	AFG14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	608	0	95.15	4.85	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	593	0	92.80	7.20	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	589	0	92.18	7.82	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	586	0	91.71	8.29	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	581	0	90.92	9.08	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/31/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6140	
Location: Center, Panjsher, Afghanistan	Topotype: ME-SA
Date collected: 30/12/2013	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG13-31.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy2 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/8/2014	AFG14-08	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/1/2014	AFG14-01	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
3	O/AFG/2/2014	AFG14-02	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/12/2014	PAK14-12	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/27/2013	PAK13-27	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/3/2014	PAK14-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/3/2014	AFG14-03	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/23/2014	PAK14-23	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/5/2014	PAK14-05	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/58/2012	PAK12-58	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	592	0	92.64	7.36	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	586	0	91.71	8.29	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	585	0	91.55	8.45	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	578	0	90.45	9.55	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	567	0	88.73	11.27	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	563	0	88.52	11.48	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/1/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6536	
Location: Center, Kapisa, Afghanistan	Topotype: ME-SA
Date collected: 03/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-01.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 11/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/2/2014	AFG14-02	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/31/2013	AFG13-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
3	O/AFG/8/2014	AFG14-08	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/12/2014	PAK14-12	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/27/2013	PAK13-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/3/2014	PAK14-03	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/3/2014	AFG14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/23/2014	PAK14-23	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/5/2014	PAK14-05	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/58/2012	PAK12-58	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	609	0	95.31	4.69	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	594	0	92.96	7.04	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	588	0	92.02	7.98	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	587	0	91.86	8.14	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	580	0	90.77	9.23	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	569	0	89.05	10.95	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	565	0	88.84	11.16	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/2/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6535	
Location: Center, Kapisa, Afghanistan	Topotype: ME-SA
Date collected: 09/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-02.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 11/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/1/2014	AFG14-01	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/31/2013	AFG13-31	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
3	O/AFG/8/2014	AFG14-08	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/12/2014	PAK14-12	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/27/2013	PAK13-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/3/2014	PAK14-03	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/3/2014	AFG14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/23/2014	PAK14-23	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/5/2014	PAK14-05	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/58/2012	PAK12-58	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	609	0	95.31	4.69	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	594	0	92.96	7.04	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	588	0	92.02	7.98	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	587	0	91.86	8.14	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	580	0	90.77	9.23	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	569	0	89.05	10.95	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	565	0	88.84	11.16	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O WRLFMD Ref No: AFG/3/2014 Batch No: WRLFMD/2015/00003 Sender Ref: 6502 Location: Paghman, Kabul, Afghanistan Date collected: 12/04/2014 Date received by WRLFMD: 31/03/2015 Date received for sequencing: 30/04/2015 Species: Cattle Material used: BTy1 15/04/2015 & BTy2 16/04/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 14/07/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{ANT-10} Sequence filename: AFG14-03.SEQ Date sequence last updated: 07/05/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4150 Min. no. of nt for comparison: 600 Total turn-around time: 105 days Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/PAK/12/2014	PAK14-12	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/27/2013	PAK13-27	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/3/2014	PAK14-03	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/23/2014	PAK14-23	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/58/2012	PAK12-58	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/AFG/1/2014	AFG14-01	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/2/2014	AFG14-02	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
8	O/AFG/23/2013	AFG13-23	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
9	O/AFG/27/2013	AFG13-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/9/2014	AFG14-09	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	609	0	95.31	4.69	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	596	0	93.27	6.73	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	590	0	92.33	7.67	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	589	0	92.18	7.82	ME-SA	PanAsia-2
5	O/TUR/264/2009* (FMDI)	TUR09-AK	639	585	0	91.55	8.45	ME-SA	PanAsia-2 ^{SAN-09}
6	O/IRN/18/2010	IRN10-18	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{BAL-09}
7	O/PAK/16/2010	PAK10-16	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	582	0	91.08	8.92	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	569	0	89.05	10.95	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	565	0	88.84	11.16	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/5/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6672	
Location: Center, Logar, Afghanistan	Topotype: ME-SA
Date collected: 23/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-05.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/PAK/12/2014	PAK14-12	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/27/2013	PAK13-27	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/3/2014	PAK14-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
4	O/AFG/3/2014	AFG14-03	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/23/2014	PAK14-23	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/58/2012	PAK12-58	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/1/2014	AFG14-01	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{ANT-10}
8	O/AFG/2/2014	AFG14-02	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{ANT-10}
9	O/AFG/23/2013	AFG13-23	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/27/2013	AFG13-27	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	606	0	94.84	5.16	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	591	0	92.49	7.51	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/8/2005	IRN05-08	639	586	0	91.71	8.29	ME-SA	PanAsia-2
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	585	0	91.55	8.45	ME-SA	PanAsia-2 ^{TER-08}
5	O/IRN/18/2010	IRN10-18	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	579	0	90.61	9.39	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	577	0	90.30	9.70	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	566	0	88.58	11.42	ME-SA	Ind-2001b
10	O/BHU/3/2009 (KM921814)	BHU09-03	639	565	0	88.42	11.58	ME-SA	Ind-2001d

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/6/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6646	
Location: Nejrab, Kapisa, Afghanistan	Topotype: ME-SA
Date collected: 24/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-06.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/PAK/23/2014	PAK14-23	639	632	0	98.90	1.10	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/5/2014	PAK14-05	639	632	0	98.90	1.10	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/58/2012	PAK12-58	639	632	0	98.90	1.10	ME-SA	PanAsia-2 ^{ANT-10}
4	O/AFG/1/2014	AFG14-01	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
5	O/AFG/2/2014	AFG14-02	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
6	O/AFG/23/2013	AFG13-23	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/27/2013	AFG13-27	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
8	O/AFG/9/2014	AFG14-09	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/12/2014	PAK14-12	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/16/2014	PAK14-16	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	588	0	92.02	7.98	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/8/2005	IRN05-08	639	583	0	91.24	8.76	ME-SA	PanAsia-2
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{TER-08}
5	O/TUR/264/2009* (FMDI)	TUR09-AK	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{SAN-09}
6	O/PAK/16/2010	PAK10-16	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{PUN-10}
7	O/UKG/35/2001 (AJ539141)	UKG01-35	639	580	0	90.77	9.23	ME-SA	PanAsia
8	O/IRN/18/2010	IRN10-18	639	579	0	90.61	9.39	ME-SA	PanAsia-2 ^{BAL-09}
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	567	0	88.73	11.27	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	563	0	88.52	11.48	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/7/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6668	
Location: Charkh, Logar, Afghanistan	Topotype: ME-SA
Date collected: 26/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-07.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/PAK/23/2014	PAK14-23	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/58/2012	PAK12-58	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
3	O/AFG/23/2013	AFG13-23	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
4	O/AFG/27/2013	AFG13-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
5	O/AFG/9/2014	AFG14-09	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/12/2014	PAK14-12	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/2/2014	PAK14-02	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/26/2013	PAK13-26	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/27/2013	PAK13-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/3/2014	PAK14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	592	0	92.64	7.36	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	586	0	91.71	8.29	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	585	0	91.55	8.45	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{BAL-09}
6	O/PAK/16/2010	PAK10-16	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{PUN-10}
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{SAN-09}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	580	0	90.77	9.23	ME-SA	PanAsia
9	O/UAE/4/2008 (KM921876)	UAE08-04	636	567	0	89.15	10.85	ME-SA	Ind-2001c
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	569	0	89.05	10.95	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/8/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6643	
Location: Safed Sang, Logar, Afghanistan	Topotype: ME-SA
Date collected: 28/04/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-08.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/31/2013	AFG13-31	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/1/2014	AFG14-01	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
3	O/AFG/2/2014	AFG14-02	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/12/2014	PAK14-12	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/27/2013	PAK13-27	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/3/2014	PAK14-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
7	O/AFG/3/2014	AFG14-03	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/23/2014	PAK14-23	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/5/2014	PAK14-05	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
10	O/PAK/58/2012	PAK12-58	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	592	0	92.64	7.36	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	586	0	91.71	8.29	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	585	0	91.55	8.45	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	578	0	90.45	9.55	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	567	0	88.73	11.27	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	563	0	88.52	11.48	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/9/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6713	
Location: Center, Kapisa, Afghanistan	Topotype: ME-SA
Date collected: 02/05/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-09.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 14/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 75 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/AFG/23/2013	AFG13-23	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
2	O/AFG/27/2013	AFG13-27	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/23/2014	PAK14-23	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/58/2012	PAK12-58	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/12/2014	PAK14-12	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/2/2014	PAK14-02	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/26/2013	PAK13-26	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
8	O/PAK/27/2013	PAK13-27	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
9	O/PAK/3/2014	PAK14-03	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/3/2014	AFG14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	608	0	95.15	4.85	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	593	0	92.80	7.20	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	589	0	92.18	7.82	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	586	0	91.71	8.29	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	584	0	91.39	8.61	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	583	0	91.24	8.76	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	581	0	90.92	9.08	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	570	0	89.20	10.80	ME-SA	Ind-2001b
10	O/UAE/4/2008 (KM921876)	UAE08-04	636	566	0	88.99	11.01	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 14/07/2015
WRLFMD Ref No: AFG/10/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00003	Checked by: K. Bachanek-Bankowska
Sender Ref: 6712	
Location: Paghman, Kabul, Afghanistan	Topotype: ME-SA
Date collected: 11/05/2014	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 31/03/2015	Sequence filename: AFG14-10.SEQ
Date received for sequencing: 29/06/2015	Date sequence last updated: 06/07/2015
Species: Cattle	No. of Nt determined: 639
Material used: RNA	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4150
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 105 days
	Sequencing time: 15 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/PAK/12/2014	PAK14-12	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/27/2013	PAK13-27	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/3/2014	PAK14-03	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{ANT-10}
4	O/AFG/3/2014	AFG14-03	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
5	O/PAK/11/2014	PAK14-11	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/23/2014	PAK14-23	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
7	O/PAK/58/2012	PAK12-58	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{ANT-10}
8	O/AFG/1/2014	AFG14-01	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
9	O/AFG/2/2014	AFG14-02	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-10}
10	O/AFG/23/2013	AFG13-23	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{ANT-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	O/IRN/88/2009	IRN09-88	639	607	0	94.99	5.01	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	592	0	92.64	7.36	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	586	0	91.71	8.29	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	585	0	91.55	8.45	ME-SA	PanAsia-2
5	O/IRN/18/2010	IRN10-18	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{BAL-09}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	581	0	90.92	9.08	ME-SA	PanAsia-2 ^{SAN-09}
7	O/PAK/16/2010	PAK10-16	639	580	0	90.77	9.23	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	578	0	90.45	9.55	ME-SA	PanAsia
9	O/OMN/7/2001 (DQ164941)	OMN01-07	639	567	0	88.73	11.27	ME-SA	Ind-2001b
10	O/BHU/3/2009 (KM921814)	BHU09-03	639	566	0	88.58	11.42	ME-SA	Ind-2001d

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

Report on FMDV O in Afghanistan in 2013-2014

Batch: WRLFMD/2015/00003

◆ indicates viruses in this batch

Software: MEGA 6.06

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 : 642

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,
28 July 2015

© The Pirbright Institute

(not to be reproduced without permission)

