

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

Genotyping Report

Report Date for this Batch: 7 May 2015

FMDV type O

Country: Bahrain

Period: 2015

No. of samples: 9

BATCH: WRLFMD/2015/00004



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FAO World Reference Laboratory for FMD Genotyping Report

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

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/2/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 42	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 26/02/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-02.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Cattle	No. of Nt determined: 639
Material used: BTy2 18/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/12/2015	BAR15-12	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/8/2015	BAR15-08	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/BAR/3/2015	BAR15-03	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/4/2015	BAR15-04	639	638	0	99.84	0.16	ME-SA	Ind-2001d
5	O/BAR/5/2015	BAR15-05	639	638	0	99.84	0.16	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	636	0	99.53	0.47	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	634	0	99.22	0.78	ME-SA	Ind-2001d

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/BHU/3/2009 (KM921814)	BHU09-03	639	615	0	96.24	3.76	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	572	0	89.51	10.49	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/3/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 59	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 05/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-03.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 21/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/4/2015	BAR15-04	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/12/2015	BAR15-12	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/BAR/2/2015	BAR15-02	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/8/2015	BAR15-08	639	638	0	99.84	0.16	ME-SA	Ind-2001d
5	O/BAR/5/2015	BAR15-05	639	637	0	99.69	0.31	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	634	0	99.22	0.78	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	634	0	99.22	0.78	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	634	0	99.22	0.78	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	633	0	99.06	0.94	ME-SA	Ind-2001d
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/BHU/3/2009 (KM921814)	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	574	0	89.83	10.17	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	569	0	89.05	10.95	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/4/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 59	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 05/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-04.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 21/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/3/2015	BAR15-03	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/12/2015	BAR15-12	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/BAR/2/2015	BAR15-02	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/8/2015	BAR15-08	639	638	0	99.84	0.16	ME-SA	Ind-2001d
5	O/BAR/5/2015	BAR15-05	639	637	0	99.69	0.31	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	635	0	99.37	0.63	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	634	0	99.22	0.78	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	634	0	99.22	0.78	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	634	0	99.22	0.78	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	633	0	99.06	0.94	ME-SA	Ind-2001d

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Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009 (KM921814)	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	589	0	92.18	7.82	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	588	0	92.02	7.98	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	574	0	90.25	9.75	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	574	0	89.83	10.17	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	571	0	89.36	10.64	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	569	0	89.05	10.95	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/5/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 61	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 08/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-05.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 21/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/12/2015	BAR15-12	639	638	0	99.84	0.16	ME-SA	Ind-2001d
2	O/BAR/2/2015	BAR15-02	639	638	0	99.84	0.16	ME-SA	Ind-2001d
3	O/BAR/8/2015	BAR15-08	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/3/2015	BAR15-03	639	637	0	99.69	0.31	ME-SA	Ind-2001d
5	O/BAR/4/2015	BAR15-04	639	637	0	99.69	0.31	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	637	0	99.69	0.31	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	636	0	99.53	0.47	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	636	0	99.53	0.47	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	636	0	99.53	0.47	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	635	0	99.37	0.63	ME-SA	Ind-2001d

Most Closely Related Reference Viruses

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Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/BHU/3/2009 (KM921814)	BHU09-03	639	616	0	96.40	3.60	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	591	0	92.49	7.51	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	590	0	92.33	7.67	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	576	0	90.57	9.43	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	576	0	90.14	9.86	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	573	0	89.67	10.33	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/8/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 68/3	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 16/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-08.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Sheep	No. of Nt determined: 639
Material used: BTy1 16/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/12/2015	BAR15-12	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/2/2015	BAR15-02	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/BAR/3/2015	BAR15-03	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/4/2015	BAR15-04	639	638	0	99.84	0.16	ME-SA	Ind-2001d
5	O/BAR/5/2015	BAR15-05	639	638	0	99.84	0.16	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	636	0	99.53	0.47	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	634	0	99.22	0.78	ME-SA	Ind-2001d

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/BHU/3/2009 (KM921814)	BHU09-03	639	615	0	96.24	3.76	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	572	0	89.51	10.49	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/12/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 68/7	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 16/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-12.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Sheep	No. of Nt determined: 639
Material used: BTy1 16/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/2/2015	BAR15-02	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/8/2015	BAR15-08	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/BAR/3/2015	BAR15-03	639	638	0	99.84	0.16	ME-SA	Ind-2001d
4	O/BAR/4/2015	BAR15-04	639	638	0	99.84	0.16	ME-SA	Ind-2001d
5	O/BAR/5/2015	BAR15-05	639	638	0	99.84	0.16	ME-SA	Ind-2001d
6	O/IND205/2013* (KM264362)	IND13-AF	639	636	0	99.53	0.47	ME-SA	Ind-2001d
7	O/IND189/2013* (KM264361)	IND13-AE	639	635	0	99.37	0.63	ME-SA	Ind-2001d
8	O/IND219/2013* (KM264363)	IND13-AG	639	635	0	99.37	0.63	ME-SA	Ind-2001d
9	O/NEP/3/2013 (KM921853)	NEP13-03	639	635	0	99.37	0.63	ME-SA	Ind-2001d
10	O/IND222/2013* (KM264364)	IND13-AH	639	634	0	99.22	0.78	ME-SA	Ind-2001d
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/BHU/3/2009 (KM921814)	BHU09-03	639	615	0	96.24	3.76	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	590	0	92.33	7.67	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	589	0	92.18	7.82	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	575	0	90.41	9.59	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	572	0	89.51	10.49	ME-SA	PanAsia
7	O/IRN/18/2010	IRN10-18	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{BAL-09}
8	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
9	O/TUR/257/2008* (FMDI)	TUR08-AD	639	569	0	89.05	10.95	ME-SA	PanAsia-2 ^{TER-08}
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/13/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 69	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 18/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-13.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Calf	No. of Nt determined: 639
Material used: BTy1 21/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/14/2015	BAR15-14	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/15/2015	BAR15-15	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/IND205/2013* (KM264362)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
4	O/IND189/2013* (KM264361)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
5	O/IND219/2013* (KM264363)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d
6	O/NEP/3/2013 (KM921853)	NEP13-03	639	631	0	98.75	1.25	ME-SA	Ind-2001d
7	O/BAR/5/2015	BAR15-05	639	630	0	98.59	1.41	ME-SA	Ind-2001d
8	O/IND222/2013* (KM264364)	IND13-AH	639	630	0	98.59	1.41	ME-SA	Ind-2001d
9	O/NEP/11/2013 (KM921855)	NEP13-11	639	630	0	98.59	1.41	ME-SA	Ind-2001d
10	O/NEP/12/2013 (KM921856)	NEP13-12	639	630	0	98.59	1.41	ME-SA	Ind-2001d

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/BHU/3/2009 (KM921814)	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	587	0	91.86	8.14	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	571	0	89.78	10.22	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	570	0	89.20	10.80	ME-SA	PanAsia
7	O/TUR/257/2008* (FMDI)	TUR08-AD	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{TER-08}
8	O/IRN/18/2010	IRN10-18	639	566	0	88.58	11.42	ME-SA	PanAsia-2 ^{BAL-09}
9	O/IRN/8/2005	IRN05-08	639	566	0	88.58	11.42	ME-SA	PanAsia-2
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/14/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 69	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 18/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-14.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Calf	No. of Nt determined: 639
Material used: BTy1 22/04/2015	No. of ambiguities: 0
Region sequenced: VPI	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/13/2015	BAR15-13	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/15/2015	BAR15-15	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/IND205/2013* (KM264362)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
4	O/IND189/2013* (KM264361)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
5	O/IND219/2013* (KM264363)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d
6	O/NEP/3/2013 (KM921853)	NEP13-03	639	631	0	98.75	1.25	ME-SA	Ind-2001d
7	O/BAR/5/2015	BAR15-05	639	630	0	98.59	1.41	ME-SA	Ind-2001d
8	O/IND222/2013* (KM264364)	IND13-AH	639	630	0	98.59	1.41	ME-SA	Ind-2001d
9	O/NEP/11/2013 (KM921855)	NEP13-11	639	630	0	98.59	1.41	ME-SA	Ind-2001d
10	O/NEP/12/2013 (KM921856)	NEP13-12	639	630	0	98.59	1.41	ME-SA	Ind-2001d

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/BHU/3/2009 (KM921814)	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	587	0	91.86	8.14	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	571	0	89.78	10.22	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	570	0	89.20	10.80	ME-SA	PanAsia
7	O/TUR/257/2008* (FMDI)	TUR08-AD	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{TER-08}
8	O/IRN/18/2010	IRN10-18	639	566	0	88.58	11.42	ME-SA	PanAsia-2 ^{BAL-09}
9	O/IRN/8/2005	IRN05-08	639	566	0	88.58	11.42	ME-SA	PanAsia-2
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 07/05/2015
WRLFMD Ref No: BAR/15/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00004	Checked by: K. Bachanek-Bankowska
Sender Ref: 69	
Location: not given, Bahrain	Topotype: ME-SA
Date collected: 18/03/2015	Genotype/strain: Ind-2001d
Date received by WRLFMD: 01/04/2015	Sequence filename: BAR15-15.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 07/05/2015
Species: Calf	No. of Nt determined: 639
Material used: BTy1 22/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 4127
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 36 days
	Sequencing time: 7 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/BAR/13/2015	BAR15-13	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/BAR/14/2015	BAR15-14	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/IND205/2013* (KM264362)	IND13-AF	639	632	0	98.90	1.10	ME-SA	Ind-2001d
4	O/IND189/2013* (KM264361)	IND13-AE	639	631	0	98.75	1.25	ME-SA	Ind-2001d
5	O/IND219/2013* (KM264363)	IND13-AG	639	631	0	98.75	1.25	ME-SA	Ind-2001d
6	O/NEP/3/2013 (KM921853)	NEP13-03	639	631	0	98.75	1.25	ME-SA	Ind-2001d
7	O/BAR/5/2015	BAR15-05	639	630	0	98.59	1.41	ME-SA	Ind-2001d
8	O/IND222/2013* (KM264364)	IND13-AH	639	630	0	98.59	1.41	ME-SA	Ind-2001d
9	O/NEP/11/2013 (KM921855)	NEP13-11	639	630	0	98.59	1.41	ME-SA	Ind-2001d
10	O/NEP/12/2013 (KM921856)	NEP13-12	639	630	0	98.59	1.41	ME-SA	Ind-2001d

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/BHU/3/2009 (KM921814)	BHU09-03	639	611	0	95.62	4.38	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	587	0	91.86	8.14	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	585	0	91.55	8.45	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	571	0	89.78	10.22	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	571	0	89.36	10.64	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	570	0	89.20	10.80	ME-SA	PanAsia
7	O/TUR/257/2008* (FMDI)	TUR08-AD	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{TER-08}
8	O/IRN/18/2010	IRN10-18	639	566	0	88.58	11.42	ME-SA	PanAsia-2 ^{BAL-09}
9	O/IRN/8/2005	IRN05-08	639	566	0	88.58	11.42	ME-SA	PanAsia-2
10	O/TUR/264/2009* (FMDI)	TUR09-AK	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{SAN-09}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Bahrain in 2015

Batch: WRLFMD/2015/00004

◆ 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 : 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,
 07 May 2015

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