

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

Genotyping Report

Report Date for this Batch: 8 May 2014

FMDV type O

Country: Turkey

Period: 2014

No. of samples: 10

BATCH: WRLFMD/2014/00012



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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 WRLFMD Ref No: TUR/3/2014 Batch No: WRLFMD/2014/00012 Sender Ref: 0007 Location: Tesvikiye, Cinarcik, Yalova, Turkey Date collected: 06/01/2014 Date received by WRLFMD: 21/03/2014 Date received for sequencing: 09/04/2014 Species: Cattle Material used: BTy1 03/04/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 03/05/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{FAR-09} Sequence filename: TUR14-03.SEQ Date sequence last updated: 16/04/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3840 Min. no. of nt for comparison: 600 Total turn-around time: 43 days Sequencing time: 24 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/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{FAR-09}
2	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR-09}
3	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/4/2014	TUR14-04	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{FAR-09}
7	O/TUR/14/2014	TUR14-14	639	623	0	97.50	2.50	ME-SA	PanAsia-2 ^{FAR-09}
8	O/TUR/24/2014	TUR14-24	639	623	0	97.50	2.50	ME-SA	PanAsia-2 ^{FAR-09}
9	O/SAU/1/2009	SAU09-01	639	622	0	97.34	2.66	ME-SA	PanAsia-2 ^{FAR-09}
10	O/SAU/2/2009	SAU09-02	639	622	0	97.34	2.66	ME-SA	PanAsia-2 ^{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	O/IRN/31/2009	IRN09-31	639	620	0	97.03	2.97	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	603	0	94.37	5.63	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	600	0	93.90	6.10	ME-SA	PanAsia-2 ^{BAL-09}
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	600	0	93.90	6.10	ME-SA	PanAsia-2 ^{TER-08}
5	O/PAK/16/2010	PAK10-16	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{PUN-10}
6	O/IRN/88/2009	IRN09-88	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{ANT-10}
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{SAN-09}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	588	0	92.02	7.98	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	575	0	89.98	10.02	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b

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: 03/05/2014
WRLFMD Ref No: TUR/4/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0010	
Location: Kabaagac, Fethiye, Mugla, Turkey	Topotype: ME-SA
Date collected: 08/01/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-04.SEQ
Date received for sequencing: 11/04/2014	Date sequence last updated: 22/04/2014
Species: Sheep	No. of Nt determined: 639
Material used: BTy1 04/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 22 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
2	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{FAR-09}
3	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/27/2014	TUR14-27	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR-09}
6	O/SAU/1/2009	SAU09-01	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
7	O/SAU/2/2009	SAU09-02	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
8	O/TUR/11/2014	TUR14-11	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
9	O/IRN/42/2009	IRN09-42	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR-09}
10	O/IRN/76/2009	IRN09-76	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{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	O/IRN/31/2009	IRN09-31	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	604	0	94.52	5.48	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{BAL-09}
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{TER-08}
5	O/IRN/88/2009	IRN09-88	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{ANT-10}
6	O/PAK/16/2010	PAK10-16	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{PUN-10}
7	O/TUR/264/2009* (FMDI)	TUR09-AK	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{SAN-09}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	590	0	92.33	7.67	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	574	0	89.83	10.17	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	574	0	89.83	10.17	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 03/05/2014
WRLFMD Ref No: TUR/9/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0025	
Location: Baglama, Merkez, Nigde, Turkey	Topotype: ME-SA
Date collected: 15/01/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-09.SEQ
Date received for sequencing: 11/04/2014	Date sequence last updated: 22/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 09/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 22 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/TUR/11/2014	TUR14-11	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/14/2014	TUR14-14	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/24/2014	TUR14-24	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/15/2014	TUR14-15	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/13/2014	TUR14-13	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/17/2014	TUR14-17	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	633	0	99.06	0.94	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	606	0	94.84	5.16	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	604	0	94.52	5.48	ME-SA	PanAsia-2 ^{BAL-09}
4	O/PAK/16/2010	PAK10-16	639	604	0	94.52	5.48	ME-SA	PanAsia-2 ^{PUN-10}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	604	0	94.52	5.48	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	594	0	92.96	7.04	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	580	0	90.77	9.23	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	576	0	90.14	9.86	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 03/05/2014
WRLFMD Ref No: TUR/11/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0051	
Location: Baglikaya, Merkez, Aksaray, Turkey	Topotype: ME-SA
Date collected: 01/02/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-11.SEQ
Date received for sequencing: 11/04/2014	Date sequence last updated: 22/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 09/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 22 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/TUR/9/2014	TUR14-09	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/14/2014	TUR14-14	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/24/2014	TUR14-24	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/15/2014	TUR14-15	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/13/2014	TUR14-13	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/17/2014	TUR14-17	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	632	0	98.90	1.10	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	605	0	94.68	5.32	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{BAL-09}
4	O/PAK/16/2010	PAK10-16	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{PUN-10}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	598	0	93.58	6.42	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	593	0	92.80	7.20	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	581	0	90.92	9.08	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	575	0	89.98	10.02	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: TUR/13/2014 Batch No: WRLFMD/2014/00012 Sender Ref: 0068 Location: Yigityolu, Altinozu, Hatay, Turkey Date collected: 06/02/2014 Date received by WRLFMD: 21/03/2014 Date received for sequencing: 22/04/2014 Species: Cattle Material used: BTy1 10/04/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 03/05/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{FAR-09} Sequence filename: TUR14-13.SEQ Date sequence last updated: 24/04/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3840 Min. no. of nt for comparison: 600 Total turn-around time: 43 days Sequencing time: 11 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/TUR/14/2014	TUR14-14	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/24/2014	TUR14-24	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/15/2014	TUR14-15	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/17/2014	TUR14-17	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	622	0	97.34	2.66	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	602	0	94.21	5.79	ME-SA	PanAsia-2
3	O/PAK/16/2010	PAK10-16	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{PUN-10}
4	O/IRN/18/2010	IRN10-18	639	600	0	93.90	6.10	ME-SA	PanAsia-2 ^{BAL-09}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	600	0	93.90	6.10	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	595	0	93.11	6.89	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	592	0	92.64	7.36	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	577	0	90.30	9.70	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	573	0	89.67	10.33	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 03/05/2014
WRLFMD Ref No: TUR/14/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0073	
Location: Hocaoglu, Merkez, Duzce, Turkey	Topotype: ME-SA
Date collected: 07/02/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-14.SEQ
Date received for sequencing: 22/04/2014	Date sequence last updated: 24/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 10/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 11 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/TUR/24/2014	TUR14-24	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/15/2014	TUR14-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/13/2014	TUR14-13	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/17/2014	TUR14-17	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	604	0	94.52	5.48	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{BAL-09}
4	O/PAK/16/2010	PAK10-16	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{PUN-10}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	592	0	92.64	7.36	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	578	0	90.45	9.55	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	574	0	89.83	10.17	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: TUR/15/2014 Batch No: WRLFMD/2014/00012 Sender Ref: 0074 Location: Sevinc, Odunpazari, Eskisehir, Turkey Date collected: 07/02/2014 Date received by WRLFMD: 21/03/2014 Date received for sequencing: 22/04/2014 Species: Cattle Material used: BTy1 10/04/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 03/05/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{FAR-09} Sequence filename: TUR14-15.SEQ Date sequence last updated: 24/04/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3840 Min. no. of nt for comparison: 600 Total turn-around time: 43 days Sequencing time: 11 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/TUR/14/2014	TUR14-14	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/24/2014	TUR14-24	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/13/2014	TUR14-13	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/17/2014	TUR14-17	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	623	0	97.50	2.50	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	603	0	94.37	5.63	ME-SA	PanAsia-2
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/18/2010	IRN10-18	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{BAL-09}
5	O/PAK/16/2010	PAK10-16	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{PUN-10}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	600	0	93.90	6.10	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	596	0	93.27	6.73	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	591	0	92.49	7.51	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	577	0	90.30	9.70	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	573	0	89.67	10.33	ME-SA	Ind-2001b

nt, nucleotides

* , not a WRLFMD reference number

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Serotype: O	Report date: 03/05/2014
WRLFMD Ref No: TUR/17/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0075	
Location: Merkez, Bitlis, Turkey	Topotype: ME-SA
Date collected: 11/02/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-17.SEQ
Date received for sequencing: 22/04/2014	Date sequence last updated: 24/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 11/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 11 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/TUR/14/2014	TUR14-14	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/24/2014	TUR14-24	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/15/2014	TUR14-15	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/13/2014	TUR14-13	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	634	0	99.22	0.78	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	622	0	97.34	2.66	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	603	0	94.37	5.63	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{BAL-09}
4	O/PAK/16/2010	PAK10-16	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{PUN-10}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	596	0	93.27	6.73	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	590	0	92.33	7.67	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	576	0	90.14	9.86	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	572	0	89.51	10.49	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 03/05/2014
WRLFMD Ref No: TUR/24/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00012	Checked by: K. Bachanek-Bankowska
Sender Ref: 0120	
Location: Bulgurcuk, Karakocan, Elazig, Turkey	Topotype: ME-SA
Date collected: 28/02/2014	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 21/03/2014	Sequence filename: TUR14-24.SEQ
Date received for sequencing: 22/04/2014	Date sequence last updated: 24/04/2014
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 12/04/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3840
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 43 days
	Sequencing time: 11 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/TUR/14/2014	TUR14-14	639	639	0	100.00	0.00	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/15/2014	TUR14-15	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/13/2014	TUR14-13	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/17/2014	TUR14-17	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/9/2014	TUR14-09	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/11/2014	TUR14-11	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
7	O/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	631	0	98.75	1.25	ME-SA	PanAsia-2 ^{FAR09}
8	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	629	0	98.44	1.56	ME-SA	PanAsia-2 ^{FAR09}
9	O/TUR/4/2014	TUR14-04	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR-09}
10	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR09}
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/31/2009	IRN09-31	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	604	0	94.52	5.48	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{BAL-09}
4	O/PAK/16/2010	PAK10-16	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{PUN-10}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	602	0	94.21	5.79	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	592	0	92.64	7.36	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	578	0	90.45	9.55	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	574	0	89.83	10.17	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: TUR/27/2014 Batch No: WRLFMD/2014/00012 Sender Ref: 0133 Location: Gedikler, Buyukorhan, Bursa, Turkey Date collected: 07/03/2014 Date received by WRLFMD: 21/03/2014 Date received for sequencing: 28/04/2014 Species: Cattle Material used: BTy1 16/04/2014 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 03/05/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: PanAsia-2 ^{FAR-09} Sequence filename: TUR14-27.SEQ Date sequence last updated: 01/05/2014 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3840 Min. no. of nt for comparison: 600 Total turn-around time: 43 days Sequencing time: 5 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/Agri/TUR/63/2013.115 (FMDI)	TUR13-AA	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR-09}
2	O/TUR/4/2014	TUR14-04	639	630	0	98.59	1.41	ME-SA	PanAsia-2 ^{FAR-09}
3	O/Agri/TUR/478/2013.327 (FMDI)	TUR13-AB	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
4	O/TUR/9/2014	TUR14-09	639	628	0	98.28	1.72	ME-SA	PanAsia-2 ^{FAR-09}
5	O/TUR/11/2014	TUR14-11	639	627	0	98.12	1.88	ME-SA	PanAsia-2 ^{FAR-09}
6	O/TUR/14/2014	TUR14-14	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR-09}
7	O/TUR/24/2014	TUR14-24	639	626	0	97.97	2.03	ME-SA	PanAsia-2 ^{FAR-09}
8	O/Eskisehir/TUR/1156/2013.577 (FMDI)	TUR13-AC	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
9	O/TUR/15/2014	TUR14-15	639	625	0	97.81	2.19	ME-SA	PanAsia-2 ^{FAR-09}
10	O/TUR/13/2014	TUR14-13	639	624	0	97.65	2.35	ME-SA	PanAsia-2 ^{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	O/IRN/31/2009	IRN09-31	639	621	0	97.18	2.82	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	599	0	93.74	6.26	ME-SA	PanAsia-2
3	O/PAK/16/2010	PAK10-16	639	599	0	93.74	6.26	ME-SA	PanAsia-2 ^{PUN-10}
4	O/IRN/18/2010	IRN10-18	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{BAL-09}
5	O/TUR/257/2008* (FMDI)	TUR08-AD	639	597	0	93.43	6.57	ME-SA	PanAsia-2 ^{TER-08}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	596	0	93.27	6.73	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	594	0	92.96	7.04	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	587	0	91.86	8.14	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	573	0	89.67	10.33	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	571	0	89.36	10.64	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Turkey in 2014

Batch: WRLFMD/2014/00012

◆ 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,
08 May 2014

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