

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

Genotyping Report

Report Date for this Batch: 19 November 2013

FMDV type O

Country: Saudi Arabia

Period: 2013

No. of samples: 3

BATCH: WRLFMD/2013/00023



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 19/11/2013
WRLFMD Ref No: SAU/1/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: N37566	
Location: Not given, Saudi Arabia	Topotype: ME-SA
Date collected: 07/08/2013	Genotype/strain: Ind-2001 ^{KAR-13}
Date received by WRLFMD: 07/11/2013	Sequence filename: SAU13-01.SEQ
Date received for sequencing: 18/11/2013	Date sequence last updated: 19/11/2013
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 08/11/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3706
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 12 days
	Sequencing time: 1 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/SAU/3/2013	SAU13-03	639	638	0	99.84	0.16	ME-SA	Ind-2001 ^{KAR-13}
2	O/SAU/4/2013	SAU13-04	639	638	0	99.84	0.16	ME-SA	Ind-2001 ^{KAR-13}
3	O/LIB/1/2013	LIB13-01	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
4	O/LIB/4/2013	LIB13-04	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
5	O/LIB/5/2013	LIB13-05	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
6	O/LIB/7/2013	LIB13-07	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
7	O/LIB/2/2013	LIB13-02	639	626	0	97.97	2.03	ME-SA	Ind-2001 ^{KAR-13}
8	O/LIB/3/2013	LIB13-03	639	626	0	97.97	2.03	ME-SA	Ind-2001 ^{KAR-13}
9	O/LIB/6/2013	LIB13-06	639	626	0	97.97	2.03	ME-SA	Ind-2001 ^{KAR-13}
10	O/BHU/1/2013	BHU13-01	639	618	0	96.71	3.29	ME-SA	Ind-2001 ^{KAR-13}
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/1/2013	BHU13-01	639	618	0	96.71	3.29	ME-SA	Ind-2001 ^{KAR-13}
2	O/BHU/3/2009	BHU09-03	639	613	0	95.93	4.07	ME-SA	Ind-2001d
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	584	0	91.39	8.61	ME-SA	Ind-2001b
4	O/KUW/3/97 (DQ164904)	KUW97-03	639	581	0	90.92	9.08	ME-SA	Ind-2001a
5	O/IRN/31/2009	IRN09-31	639	574	0	89.83	10.17	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UAE/4/2008	UAE08-04	636	571	0	89.78	10.22	ME-SA	Ind-2001c
7	O/IRN/8/2005	IRN05-08	639	570	0	89.20	10.80	ME-SA	PanAsia-2
8	O/PAK/16/2010	PAK10-16	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{PUN-10}
9	O/IRN/61/2001 (DQ164896)	IRN01-61	638	566	1	88.71	11.29	ME-SA	Irn-2001
10	O/IRN/18/2010	IRN10-18	639	566	0	88.58	11.42	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 19/11/2013
WRLFMD Ref No: SAU/3/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: N37588	
Location: Not given, Saudi Arabia	Topotype: ME-SA
Date collected: 07/08/2013	Genotype/strain: Ind-2001 ^{KAR-13}
Date received by WRLFMD: 07/11/2013	Sequence filename: SAU13-03.SEQ
Date received for sequencing: 18/11/2013	Date sequence last updated: 19/11/2013
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 09/11/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3706
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 12 days
	Sequencing time: 1 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/SAU/4/2013	SAU13-04	639	639	0	100.00	0.00	ME-SA	Ind-2001 ^{KAR-13}
2	O/SAU/1/2013	SAU13-01	639	638	0	99.84	0.16	ME-SA	Ind-2001 ^{KAR-13}
3	O/LIB/1/2013	LIB13-01	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
4	O/LIB/4/2013	LIB13-04	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
5	O/LIB/5/2013	LIB13-05	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
6	O/LIB/7/2013	LIB13-07	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
7	O/LIB/2/2013	LIB13-02	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
8	O/LIB/3/2013	LIB13-03	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
9	O/LIB/6/2013	LIB13-06	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
10	O/BHU/1/2013	BHU13-01	639	619	0	96.87	3.13	ME-SA	Ind-2001 ^{KAR-13}
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
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1	O/BHU/1/2013	BHU13-01	639	619	0	96.87	3.13	ME-SA	Ind-2001 ^{KAR-13}
2	O/BHU/3/2009	BHU09-03	639	614	0	96.09	3.91	ME-SA	Ind-2001d
3	O/OMN/7/2001 (DQ164941)	OMN01-07	639	585	0	91.55	8.45	ME-SA	Ind-2001b
4	O/KUW/3/97 (DQ164904)	KUW97-03	639	582	0	91.08	8.92	ME-SA	Ind-2001a
5	O/IRN/31/2009	IRN09-31	639	575	0	89.98	10.02	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UAE/4/2008	UAE08-04	636	572	0	89.94	10.06	ME-SA	Ind-2001c
7	O/IRN/8/2005	IRN05-08	639	571	0	89.36	10.64	ME-SA	PanAsia-2
8	O/PAK/16/2010	PAK10-16	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{PUN-10}
9	O/IRN/18/2010	IRN10-18	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{BAL-09}
10	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia

nt, nucleotides

*, not a WRLFMD reference number

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WRLFMD Ref No: SAU/4/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00023	Checked by: K. Bachanek-Bankowska
Sender Ref: N37590	
Location: Not given, Saudi Arabia	Topotype: ME-SA
Date collected: 07/08/2013	Genotype/strain: Ind-2001 ^{KAR-13}
Date received by WRLFMD: 07/11/2013	Sequence filename: SAU13-04.SEQ
Date received for sequencing: 18/11/2013	Date sequence last updated: 19/11/2013
Species: Cattle	No. of Nt determined: 639
Material used: BTy1 09/11/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 3706
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4	O/LIB/4/2013	LIB13-04	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
5	O/LIB/5/2013	LIB13-05	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
6	O/LIB/7/2013	LIB13-07	639	628	0	98.28	1.72	ME-SA	Ind-2001 ^{KAR-13}
7	O/LIB/2/2013	LIB13-02	639	627	0	98.12	1.88	ME-SA	Ind-2001 ^{KAR-13}
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8	O/PAK/16/2010	PAK10-16	639	568	0	88.89	11.11	ME-SA	PanAsia-2 ^{PUN-10}
9	O/IRN/18/2010	IRN10-18	639	567	0	88.73	11.27	ME-SA	PanAsia-2 ^{BAL-09}
10	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia

nt, nucleotides

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Report on FMDV O in Saudi Arabia in 2013

Batch: WRLFMD/2013/00023

◆ indicates viruses in this batch

Software: MEGA 5.2

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

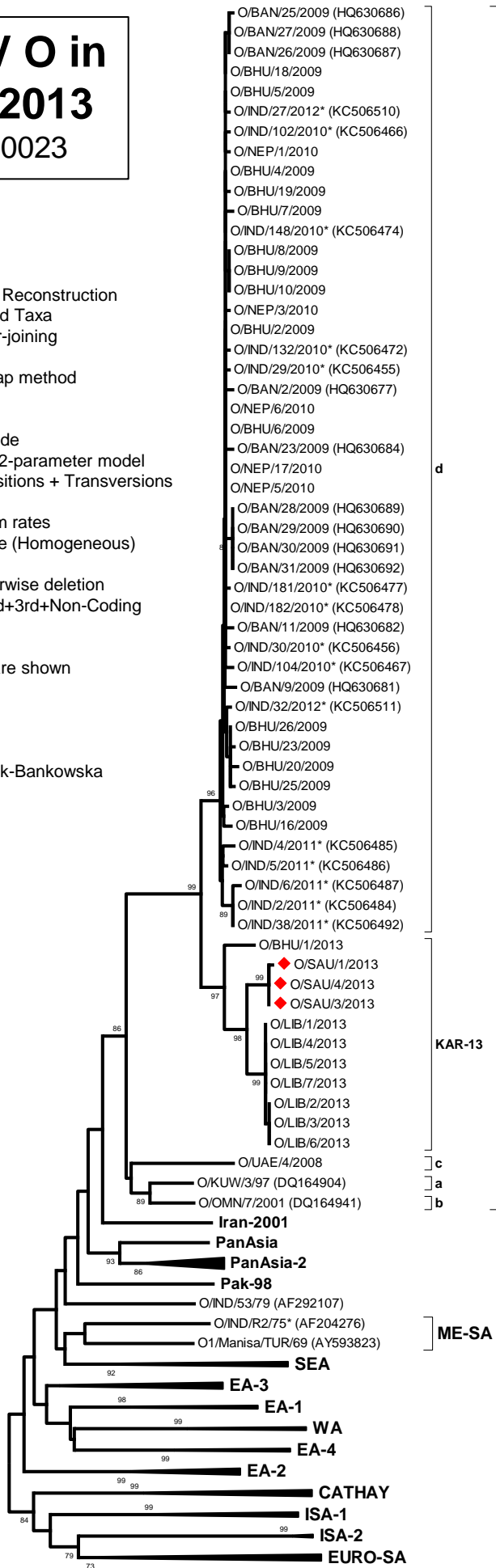
*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska

19 November 2013

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