

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

Genotyping Report

Report Date for this Batch: 20 November 2015

FMDV type O

Country: Morocco

Period: 2015

No. of samples: 3

BATCH: WRLFMD/2015/00030



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O WRLFMD Ref No: MOR/1/2015 Batch No: WRLFMD/2015/00030 Sender Ref: SB1 Location: Bouhmame village, Sidi Bennour province, Casablanca-Settat region, Morocco Date collected: 28/10/2015 Date received by WRLFMD: 12/11/2015 Date received for sequencing: 18/11/2015 Species: Bovine Material used: BTy1 14/11/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 20/11/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: Ind-2001d Sequence filename: MOR15-01.SEQ Date sequence last updated: 20/11/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4179 Min. no. of nt for comparison: 600 Total turn-around time: 8 days Sequencing time: 2 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MOR/2/2015	MOR15-02	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/MOR/3/2015	MOR15-03	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/TUN/1054/2014*	TUN14-AB	639	634	0	99.22	0.78	ME-SA	Ind-2001d
4	O/1631-FA001/Algeria/2014 (IZSLER)	ALG14-AB	639	632	0	98.90	1.10	ME-SA	Ind-2001d
5	O/1631-FA002/Algeria/2014 (IZSLER)	ALG14-AC	639	632	0	98.90	1.10	ME-SA	Ind-2001d
6	O/1636/Algeria/2014 (IZSLER)	ALG14-AD	639	632	0	98.90	1.10	ME-SA	Ind-2001d
7	O/ALG/2/2014	ALG14-02	639	632	0	98.90	1.10	ME-SA	Ind-2001d
8	O/ALG/3/2014	ALG14-03	639	632	0	98.90	1.10	ME-SA	Ind-2001d
9	O/TUN/1/2014	TUN14-01	639	632	0	98.90	1.10	ME-SA	Ind-2001d
10	O/TUN/1031/2014*	TUN14-AA	639	632	0	98.90	1.10	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	605	0	94.68	5.32	ME-SA	Ind-2001d
2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	582	0	91.08	8.92	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	581	0	90.92	9.08	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	570	0	89.62	10.38	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia
7	O/PAK/16/2010	PAK10-16	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{PUN-10}
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	563	0	88.11	11.89	ME-SA	PanAsia-2 ^{TER-08}
9	O/IRN/18/2010	IRN10-18	639	562	0	87.95	12.05	ME-SA	PanAsia-2 ^{BAL-09}
10	O/IRN/8/2005	IRN05-08	639	562	0	87.95	12.05	ME-SA	PanAsia-2

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MOR/2/2015 Batch No: WRLFMD/2015/00030 Sender Ref: SB2 Location: Bouhmame village, Sidi Bennour province, Casablanca-Settat region, Morocco Date collected: 28/10/2015 Date received by WRLFMD: 12/11/2015 Date received for sequencing: 18/11/2015 Species: Bovine Material used: BTy1 13/11/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 20/11/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: Ind-2001d Sequence filename: MOR15-02.SEQ Date sequence last updated: 20/11/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4179 Min. no. of nt for comparison: 600 Total turn-around time: 8 days Sequencing time: 2 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/MOR/1/2015	MOR15-01	639	639	0	100.00	0.00	ME-SA	Ind-2001d
2	O/MOR/3/2015	MOR15-03	639	639	0	100.00	0.00	ME-SA	Ind-2001d
3	O/TUN/1054/2014*	TUN14-AB	639	634	0	99.22	0.78	ME-SA	Ind-2001d
4	O/1631-FA001/Algeria/2014 (IZSLER)	ALG14-AB	639	632	0	98.90	1.10	ME-SA	Ind-2001d
5	O/1631-FA002/Algeria/2014 (IZSLER)	ALG14-AC	639	632	0	98.90	1.10	ME-SA	Ind-2001d
6	O/1636/Algeria/2014 (IZSLER)	ALG14-AD	639	632	0	98.90	1.10	ME-SA	Ind-2001d
7	O/ALG/2/2014	ALG14-02	639	632	0	98.90	1.10	ME-SA	Ind-2001d
8	O/ALG/3/2014	ALG14-03	639	632	0	98.90	1.10	ME-SA	Ind-2001d
9	O/TUN/1/2014	TUN14-01	639	632	0	98.90	1.10	ME-SA	Ind-2001d
10	O/TUN/1031/2014*	TUN14-AA	639	632	0	98.90	1.10	ME-SA	Ind-2001d
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2	O/OMN/7/2001 (DQ164941)	OMN01-07	639	582	0	91.08	8.92	ME-SA	Ind-2001b
3	O/KUW/3/97 (DQ164904)	KUW97-03	639	581	0	90.92	9.08	ME-SA	Ind-2001a
4	O/UAE/4/2008 (KM921876)	UAE08-04	636	570	0	89.62	10.38	ME-SA	Ind-2001c
5	O/IRN/31/2009	IRN09-31	639	570	0	89.20	10.80	ME-SA	PanAsia-2 ^{FAR-09}
6	O/UKG/35/2001 (AJ539141)	UKG01-35	639	567	0	88.73	11.27	ME-SA	PanAsia
7	O/PAK/16/2010	PAK10-16	639	564	0	88.26	11.74	ME-SA	PanAsia-2 ^{PUN-10}
8	O/TUR/257/2008* (FMDI)	TUR08-AD	639	563	0	88.11	11.89	ME-SA	PanAsia-2 ^{TER-08}
9	O/IRN/18/2010	IRN10-18	639	562	0	87.95	12.05	ME-SA	PanAsia-2 ^{BAL-09}
10	O/IRN/8/2005	IRN05-08	639	562	0	87.95	12.05	ME-SA	PanAsia-2

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MOR/3/2015 Batch No: WRLFMD/2015/00030 Sender Ref: SB3 Location: Bouhmame village, Sidi Bennour province, Casablanca-Settat region, Morocco Date collected: 28/10/2015 Date received by WRLFMD: 12/11/2015 Date received for sequencing: 18/11/2015 Species: Bovine Material used: BTy1 14/11/2015 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 20/11/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ME-SA Genotype/strain: Ind-2001d Sequence filename: MOR15-03.SEQ Date sequence last updated: 20/11/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 4179 Min. no. of nt for comparison: 600 Total turn-around time: 8 days Sequencing time: 2 days
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6	O/1636/Algeria/2014 (IZSLER)	ALG14-AD	639	632	0	98.90	1.10	ME-SA	Ind-2001d
7	O/ALG/2/2014	ALG14-02	639	632	0	98.90	1.10	ME-SA	Ind-2001d
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10	O/IRN/8/2005	IRN05-08	639	562	0	87.95	12.05	ME-SA	PanAsia-2

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.3

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Report on FMDV O in Morocco in 2015

Batch: WRLFMD/2015/00030

◆ 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

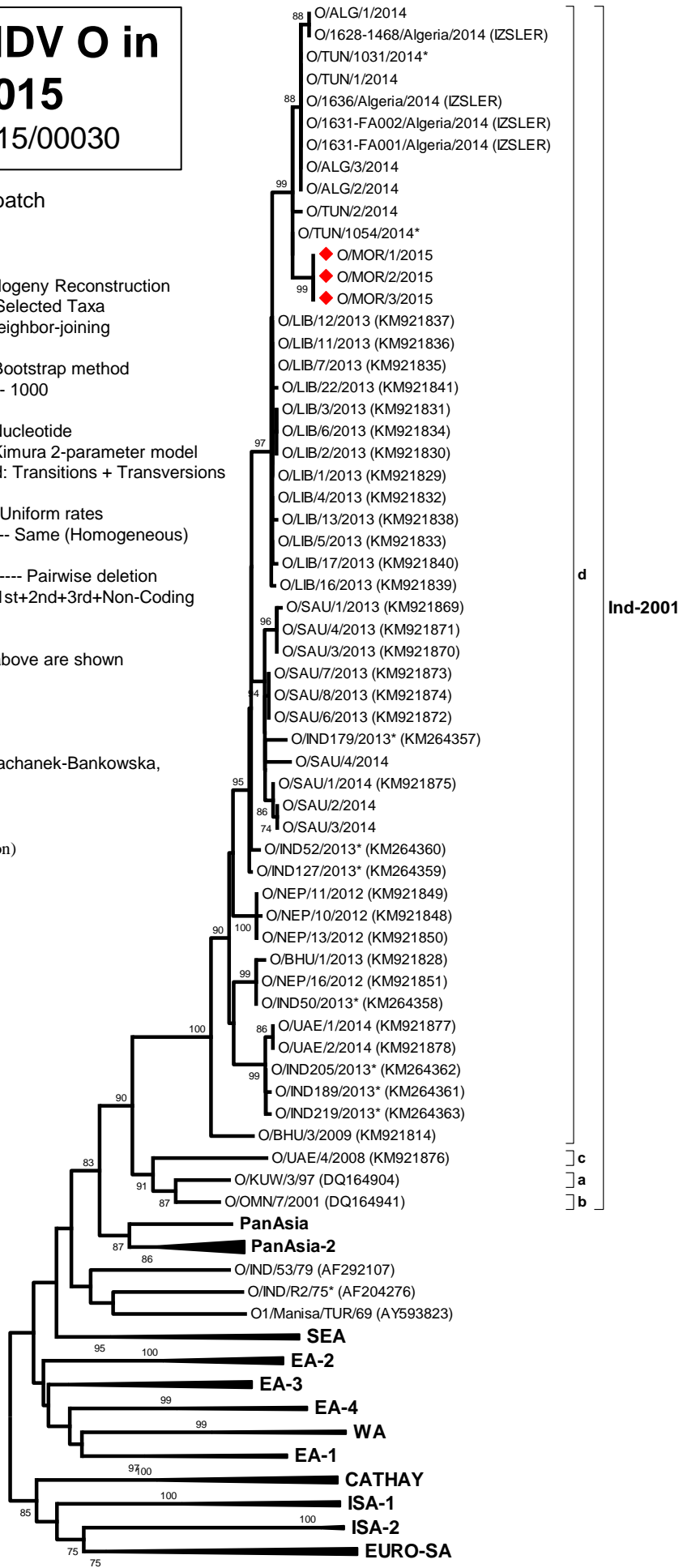
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Bachanek-Bankowska,
20 November 2015

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d

Ind-2001

ME-SA

c
a
b

0.02