

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

Genotyping Report

Report Date for this Batch: 17 December 2015

FMDV type A

Country: Myanmar

Period: 2015

No. of samples: 3

BATCH: WRLFMD/2015/00035



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FAO World Reference Laboratory for FMD Genotyping Report

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

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Serotype: A	Report date: 17/12/2015
WRLFMD Ref No: MYA/2/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00035	Checked by: K. Bachanek-Bankowska
Sender Ref: MYA 3/15R3	
Location: Mahlaing, Mandalay State, Myanmar	Topotype: ASIA
Date collected: 29/10/2015	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2015	Sequence filename: MYA15-02.SEQ
Date received for sequencing: 09/12/2015	Date sequence last updated: 10/12/2015
Species: Bovine	No. of Nt determined: 636
Material used: BTy1 04/12/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2089
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 21 days
	Sequencing time: 8 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/MYA/3/2015	MYA15-03	636	636	0	100.00	0.00	ASIA	Sea-97
2	A/MYA/4/2015	MYA15-04	636	636	0	100.00	0.00	ASIA	Sea-97
3	A/Amur/2/RUS/2013 (ARRIAH)	RUS13-AH	636	635	0	99.84	0.16	ASIA	Sea-97
4	A/Amur/4/RUS/2013 (ARRIAH)	RUS13-AJ	636	635	0	99.84	0.16	ASIA	Sea-97
5	A/GDMM-CHA-2013-S (KF450794)	CHA13-AA	636	635	0	99.84	0.16	ASIA	Sea-97
6	A/GZ-HX/CHA/2013 (KJ646647)	CHA13-AG	636	635	0	99.84	0.16	ASIA	Sea-97
7	A/GZ-JC/CHA/2013 (KJ646650)	CHA13-AJ	636	635	0	99.84	0.16	ASIA	Sea-97
8	A/GZ-ZB/CHA/2013 (KJ646649)	CHA13-AI	636	635	0	99.84	0.16	ASIA	Sea-97
9	A/TAI/17/2014	TAI14-17	636	635	0	99.84	0.16	ASIA	Sea-97
10	A/Zabaikalsky/RUS/2013 (ARRIAH)	RUS13-AA	636	635	0	99.84	0.16	ASIA	Sea-97
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	A/TAI/7/2003 (HQ116312)	TAI03-07	636	597	0	93.87	6.13	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	575	0	90.41	9.59	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	557	0	87.58	12.42	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	525	0	82.55	17.45	ASIA	A22
5	A/IRN/2/87 (EF208770)	IRN87-02	633	520	0	82.15	17.85	ASIA	Iran-87
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	636	517	0	81.29	18.71	ASIA	A15
7	A/IRN/1/2011	IRN11-01	636	516	0	81.13	18.87	ASIA	Iran-05 ^{FAR-11}
8	A/IRN/78/2009	IRN09-78	636	516	0	81.13	18.87	ASIA	Iran-05 ^{FAR-09}
9	A/GHA/16/73 (KF561698)	GHA73-16	633	513	0	81.04	18.96	AFRICA	G-VI
10	A/IND/40/2000* (1999;AF390646)	IND00-40	636	515	0	80.97	19.03	ASIA	G-VII

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: MYA/3/2015 Batch No: WRLFMD/2015/00035 Sender Ref: MYA 12/15R3 Location: Amayapuya, Mandalay State, Myanmar Date collected: 29/10/2015 Date received by WRLFMD: 26/11/2015 Date received for sequencing: 11/12/2015 Species: Bovine Material used: BTy2 09/12/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 17/12/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: Sea-97 Sequence filename: MYA15-03.SEQ Date sequence last updated: 15/12/2015 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 2089 Min. no. of nt for comparison: 600 Total turn-around time: 21 days Sequencing time: 6 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	A/MYA/2/2015	MYA15-02	636	636	0	100.00	0.00	ASIA	Sea-97
2	A/MYA/4/2015	MYA15-04	636	636	0	100.00	0.00	ASIA	Sea-97
3	A/Amur/2/RUS/2013 (ARRIAH)	RUS13-AH	636	635	0	99.84	0.16	ASIA	Sea-97
4	A/Amur/4/RUS/2013 (ARRIAH)	RUS13-AJ	636	635	0	99.84	0.16	ASIA	Sea-97
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6	A/GZ-HX/CHA/2013 (KJ646647)	CHA13-AG	636	635	0	99.84	0.16	ASIA	Sea-97
7	A/GZ-JC/CHA/2013 (KJ646650)	CHA13-AJ	636	635	0	99.84	0.16	ASIA	Sea-97
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Serotype: A WRLFMD Ref No: MYA/4/2015 Batch No: WRLFMD/2015/00035 Sender Ref: MYA 15/15R3 Location: Narhtogyi, Mandalay State, Myanmar Date collected: 29/10/2015 Date received by WRLFMD: 26/11/2015 Date received for sequencing: 09/12/2015 Species: Bovine Material used: BTy1 04/12/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 17/12/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: Sea-97 Sequence filename: MYA15-04.SEQ Date sequence last updated: 10/12/2015 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 2089 Min. no. of nt for comparison: 600 Total turn-around time: 21 days Sequencing time: 8 days
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Report on FMDV A in Myanmar in 2015

Batch: WRLFMD/2015/00035

◆ indicates viruses in this batch

Software: MEGA 6.06

Analysis

----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

----- Nucleotide

Model/Method ----- Kimura 2-parameter model

Substitutions to Include ----- d: Transitions + Transversions

Rates and Patterns

----- Uniform rates

Pattern among Lineages ----- Same (Homogeneous)

Data Subset to Use

----- Pairwise deletion

Codons Included ----- 1st+2nd+3rd+Non-Coding

No. of Sites : 639

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,
17 December 2015

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Sea-97

ASIA

0.02