

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

## Genotyping Report

Report Date for this Batch: 14 September 2015

FMDV type A

Country: Vietnam

Period: 2015

No. of samples: 3

BATCH: WRLFMD/2015/00018



The contents of this report are copyright and should not be reproduced without permission

© The Pirbright Institute

# FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: A	Report date: 14/09/2015
WRLFMD Ref No: VIT/1/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00018	Checked by: K. Bachanek-Bankowska
Sender Ref: VIT 2/15 R1B3	
Location: Ban Ninh, Vietnam	Topotype: ASIA
Date collected: 27/04/2015	Genotype/strain: Sea-97
Date received by WRLFMD: 12/08/2015	Sequence filename: VIT15-01.SEQ
Date received for sequencing: 28/08/2015	Date sequence last updated: 07/09/2015
Species: Pig	No. of Nt determined: 636
Material used: RS1 15/08/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2058
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 17 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/VIT/3/2014	VIT14-03	633	632	0	99.84	0.16	ASIA	Sea-97
2	A/VIT/3/2015	VIT15-03	636	635	0	99.84	0.16	ASIA	Sea-97
3	A/VIT/35/2013	VIT13-35	633	632	0	99.84	0.16	ASIA	Sea-97
4	A/VIT/54/2013	VIT13-54	633	632	0	99.84	0.16	ASIA	Sea-97
5	A/VIT/6/2014	VIT14-06	633	632	0	99.84	0.16	ASIA	Sea-97
6	A/VIT/7/2014	VIT14-07	633	632	0	99.84	0.16	ASIA	Sea-97
7	A/VIT/2/2014	VIT14-02	633	631	0	99.68	0.32	ASIA	Sea-97
8	A/VIT/42/2013	VIT13-42	633	630	0	99.53	0.47	ASIA	Sea-97
9	A/VIT/59/2013	VIT13-59	633	630	0	99.53	0.47	ASIA	Sea-97
10	A/TAI/5/2014	TAI14-05	633	629	0	99.37	0.63	ASIA	Sea-97
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
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	633	588	0	92.89	7.11	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	633	572	0	90.36	9.64	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	633	558	0	88.15	11.85	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	526	0	82.70	17.30	ASIA	A <sub>22</sub>
5	A/IRN/2/87 (EF208770)	IRN87-02	633	522	0	82.46	17.54	ASIA	Iran-87
6	A/IRN/1/2011	IRN11-01	636	524	0	82.39	17.61	ASIA	Iran-05 <sup>FAR-11</sup>
7	A12/UK/119/32 (M10975)	UKG32119	636	519	0	81.60	18.40	EURO-SA	A <sub>12</sub>
8	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	519	0	81.60	18.40	AFRICA	G-III
9	A/IRN/78/2009	IRN09-78	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>FAR-09</sup>
10	A/IRN/1/96 (EF208771)	IRN96-01	635	516	1	81.26	18.74	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

# FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: A	Report date: 14/09/2015
WRLFMD Ref No: VIT/2/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00018	Checked by: K. Bachanek-Bankowska
Sender Ref: VIT 4/15 R1B3	
Location: Bac Kan, Vietnam	Topotype: ASIA
Date collected: 27/04/2015	Genotype/strain: Sea-97
Date received by WRLFMD: 12/08/2015	Sequence filename: VIT15-02.SEQ
Date received for sequencing: 28/08/2015	Date sequence last updated: 07/09/2015
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 14/08/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2058
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 17 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/VIT/8/2014	VIT14-08	633	632	0	99.84	0.16	ASIA	Sea-97
2	A/VIT/35/2013	VIT13-35	633	628	0	99.21	0.79	ASIA	Sea-97
3	A/VIT/42/2013	VIT13-42	633	628	0	99.21	0.79	ASIA	Sea-97
4	A/VIT/54/2013	VIT13-54	633	628	0	99.21	0.79	ASIA	Sea-97
5	A/VIT/1/2015	VIT15-01	636	630	0	99.06	0.94	ASIA	Sea-97
6	A/MAY/17/2013	MAY13-17	633	627	0	99.05	0.95	ASIA	Sea-97
7	A/TAI/5/2014	TAI14-05	633	627	0	99.05	0.95	ASIA	Sea-97
8	A/VIT/2/2014	VIT14-02	633	627	0	99.05	0.95	ASIA	Sea-97
9	A/VIT/56/2013	VIT13-56	633	627	0	99.05	0.95	ASIA	Sea-97
10	A/VIT/3/2015	VIT15-03	636	629	0	98.90	1.10	ASIA	Sea-97
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
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	633	587	0	92.73	7.27	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	633	571	0	90.21	9.79	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	633	557	0	87.99	12.01	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	523	0	82.23	17.77	ASIA	A <sub>22</sub>
5	A/IRN/2/87 (EF208770)	IRN87-02	633	518	0	81.83	18.17	ASIA	Iran-87
6	A/IRN/1/2011	IRN11-01	636	519	0	81.60	18.40	ASIA	Iran-05 <sup>FAR-11</sup>
7	A/IRN/78/2009	IRN09-78	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>FAR-09</sup>
8	A/IRN/1/96 (EF208771)	IRN96-01	635	517	1	81.42	18.58	ASIA	Iran-96
9	A/BAR/6/2008 (FJ755010)	BAR08-06	636	517	0	81.29	18.71	ASIA	Iran-05 <sup>BAR-08</sup>
10	A12/UK/119/32 (M10975)	UKG32119	636	517	0	81.29	18.71	EURO-SA	A <sub>12</sub>

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

# FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: A	Report date: 14/09/2015
WRLFMD Ref No: VIT/3/2015	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00018	Checked by: K. Bachanek-Bankowska
Sender Ref: VIT 9/15 R3B3	
Location: Son La, Vietnam	Topotype: ASIA
Date collected: 27/04/2015	Genotype/strain: Sea-97
Date received by WRLFMD: 12/08/2015	Sequence filename: VIT15-03.SEQ
Date received for sequencing: 28/08/2015	Date sequence last updated: 14/09/2015
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 14/08/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 2058
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 17 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/VIT/3/2014	VIT14-03	633	633	0	100.00	0.00	ASIA	Sea-97
2	A/VIT/1/2015	VIT15-01	636	635	0	99.84	0.16	ASIA	Sea-97
3	A/VIT/35/2013	VIT13-35	633	631	0	99.68	0.32	ASIA	Sea-97
4	A/VIT/54/2013	VIT13-54	633	631	0	99.68	0.32	ASIA	Sea-97
5	A/VIT/6/2014	VIT14-06	633	631	0	99.68	0.32	ASIA	Sea-97
6	A/VIT/7/2014	VIT14-07	633	631	0	99.68	0.32	ASIA	Sea-97
7	A/VIT/2/2014	VIT14-02	633	630	0	99.53	0.47	ASIA	Sea-97
8	A/VIT/42/2013	VIT13-42	633	629	0	99.37	0.63	ASIA	Sea-97
9	A/VIT/59/2013	VIT13-59	633	629	0	99.37	0.63	ASIA	Sea-97
10	A/TAI/5/2014	TAI14-05	633	628	0	99.21	0.79	ASIA	Sea-97
Most Closely Related Reference Viruses									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
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	633	589	0	93.05	6.95	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	633	573	0	90.52	9.48	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	633	559	0	88.31	11.69	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	527	0	82.86	17.14	ASIA	A <sub>22</sub>
5	A/IRN/2/87 (EF208770)	IRN87-02	633	523	0	82.62	17.38	ASIA	Iran-87
6	A/IRN/1/2011	IRN11-01	636	525	0	82.55	17.45	ASIA	Iran-05 <sup>FAR-11</sup>
7	A12/UK/119/32 (M10975)	UKG32119	636	520	0	81.76	18.24	EURO-SA	A <sub>12</sub>
8	A/IRN/78/2009	IRN09-78	636	518	0	81.45	18.55	ASIA	Iran-05 <sup>FAR-09</sup>
9	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	518	0	81.45	18.55	AFRICA	G-III
10	A/IRN/1/96 (EF208771)	IRN96-01	635	517	1	81.42	18.58	ASIA	Iran-96

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.3

© The Pirbright Institute (not to be reproduced without permission)

# Report on FMDV A in Vietnam in 2015

Batch: WRLFMD/2015/00018

◆ 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,  
14 September 2015

© The Pirbright Institute

(not to be reproduced without permission)

