

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

Genotyping Report

Report Date for this Batch: 20 December 2013

FMDV type A

Country: Vietnam

Period: 2013

No. of samples: 8

BATCH: WRLFMD/2013/00025

A number of samples from which FMD virus could not be isolated, but which were positive by real-time RT-PCR, are under further investigation.



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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: 20/12/2013
WRLFMD Ref No: VIT/42/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-13548	
Location: Ha Tinh, Vietnam	Topotype: ASIA
Date collected: 16/10/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-42.SEQ
Date received for sequencing: 09/12/2013	Date sequence last updated: 12/12/2013
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 30/11/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 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	A/VIT/54/2013	VIT13-54	636	632	0	99.37	0.63	ASIA	Sea-97
2	A/VIT/56/2013	VIT13-56	636	631	0	99.21	0.79	ASIA	Sea-97
3	A/VIT/53/2013	VIT13-53	636	630	0	99.06	0.94	ASIA	Sea-97
4	A/VIT/49/2013	VIT13-49	633	626	0	98.89	1.11	ASIA	Sea-97
5	A/VIT/58/2013	VIT13-58	636	628	0	98.74	1.26	ASIA	Sea-97
6	A/VIT/60/2013	VIT13-60	636	628	0	98.74	1.26	ASIA	Sea-97
7	A/VIT/55/2013	VIT13-55	636	626	0	98.43	1.57	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	602	0	94.65	5.35	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	602	0	94.65	5.35	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	601	0	94.50	5.50	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	590	0	92.77	7.23	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	572	0	89.94	10.06	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	560	0	88.05	11.95	ASIA	Thai-87
4	A/IRN/1/2011	IRN11-01	636	523	0	82.23	17.77	ASIA	Iran-05 ^{FAR-11}
5	A22/IRQ/64 (AY593763)	IRQ64--A	636	523	0	82.23	17.77	ASIA	A ₂₂
6	A/IRN/2/87 (EF208770)	IRN87-02	633	520	0	82.15	17.85	ASIA	Iran-87
7	A/IRN/1/96 (EF208771)	IRN96-01	635	518	1	81.57	18.43	ASIA	Iran-96
8	A/IRN/78/2009	IRN09-78	636	518	0	81.45	18.55	ASIA	Iran-05 ^{FAR-09}
9	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	518	0	81.45	18.55	AFRICA	G-III
10	A/GHA/16/73 (KF561698)	GHA73-16	633	515	0	81.36	18.64	AFRICA	G-VI

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/49/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-14069	
Location: Lam Dong, Vietnam	Topotype: ASIA
Date collected: 28/10/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-49.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 17/12/2013
Species: Cattle	No. of Nt determined: 633
Material used: BTy2 07/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 633
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1808
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/42/2013	VIT13-42	633	626	0	98.89	1.11	ASIA	Sea-97
2	A/VIT/54/2013	VIT13-54	633	624	0	98.58	1.42	ASIA	Sea-97
3	A/VIT/56/2013	VIT13-56	633	624	0	98.58	1.42	ASIA	Sea-97
4	A/VIT/60/2013	VIT13-60	633	623	0	98.42	1.58	ASIA	Sea-97
5	A/VIT/53/2013	VIT13-53	633	622	0	98.26	1.74	ASIA	Sea-97
6	A/VIT/55/2013	VIT13-55	633	621	0	98.10	1.90	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	633	621	0	98.10	1.90	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	633	595	0	94.00	6.00	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	633	595	0	94.00	6.00	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	633	594	0	93.84	6.16	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	633	583	0	92.10	7.90	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	633	565	0	89.26	10.74	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	633	553	0	87.36	12.64	ASIA	Thai-87
4	A/IRN/1/2011	IRN11-01	633	518	0	81.83	18.17	ASIA	Iran-05 ^{FAR-11}
5	A/IRN/2/87 (EF208770)	IRN87-02	633	517	0	81.67	18.33	ASIA	Iran-87
6	A22/IRQ/64 (AY593763)	IRQ64--A	633	517	0	81.67	18.33	ASIA	A ₂₂
7	A/IRN/78/2009	IRN09-78	633	513	0	81.04	18.96	ASIA	Iran-05 ^{FAR-09}
8	A/IRN/1/96 (EF208771)	IRN96-01	632	512	1	81.01	18.99	ASIA	Iran-96
9	A/BAR/6/2008 (FJ755010)	BAR08-06	633	512	0	80.88	19.12	ASIA	Iran-05 ^{BAR-08}
10	A/IRN/15/2012	IRN12-15	633	512	0	80.88	19.12	ASIA	Iran-05 ^{SIS-12}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/53/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-14334	
Location: Quang Nam, Vietnam	Topotype: ASIA
Date collected: 02/11/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-53.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 17/12/2013
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 05/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/42/2013	VIT13-42	636	630	0	99.06	0.94	ASIA	Sea-97
2	A/VIT/54/2013	VIT13-54	636	630	0	99.06	0.94	ASIA	Sea-97
3	A/VIT/56/2013	VIT13-56	636	629	0	98.90	1.10	ASIA	Sea-97
4	A/VIT/49/2013	VIT13-49	633	622	0	98.26	1.74	ASIA	Sea-97
5	A/VIT/58/2013	VIT13-58	636	624	0	98.11	1.89	ASIA	Sea-97
6	A/VIT/60/2013	VIT13-60	636	624	0	98.11	1.89	ASIA	Sea-97
7	A/VIT/55/2013	VIT13-55	636	622	0	97.80	2.20	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	598	0	94.03	5.97	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	598	0	94.03	5.97	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	597	0	93.87	6.13	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	587	0	92.30	7.70	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	571	0	89.78	10.22	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	523	0	82.23	17.77	ASIA	A ₂₂
5	A/IRN/2/87 (EF208770)	IRN87-02	633	519	0	81.99	18.01	ASIA	Iran-87
6	A/IRN/1/2011	IRN11-01	636	519	0	81.60	18.40	ASIA	Iran-05 ^{FAR-11}
7	A/GHA/16/73 (KF561698)	GHA73-16	633	515	0	81.36	18.64	AFRICA	G-VI
8	A12/UK/119/32 (M10975)	UKG32119	636	516	0	81.13	18.87	EURO-SA	A ₁₂
9	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	516	0	81.13	18.87	AFRICA	G-III
10	A/IRN/1/96 (EF208771)	IRN96-01	635	514	1	80.94	19.06	ASIA	Iran-96

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/54/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-14606	
Location: Quang Nam, Vietnam	Topotype: ASIA
Date collected: 07/11/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-54.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 20/12/2013
Species: Water Buffalo	No. of Nt determined: 636
Material used: BTy1 05/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/42/2013	VIT13-42	636	632	0	99.37	0.63	ASIA	Sea-97
2	A/VIT/53/2013	VIT13-53	636	630	0	99.06	0.94	ASIA	Sea-97
3	A/VIT/56/2013	VIT13-56	636	629	0	98.90	1.10	ASIA	Sea-97
4	A/VIT/49/2013	VIT13-49	633	624	0	98.58	1.42	ASIA	Sea-97
5	A/VIT/58/2013	VIT13-58	636	626	0	98.43	1.57	ASIA	Sea-97
6	A/VIT/60/2013	VIT13-60	636	626	0	98.43	1.57	ASIA	Sea-97
7	A/VIT/55/2013	VIT13-55	636	624	0	98.11	1.89	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	602	0	94.65	5.35	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	602	0	94.65	5.35	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	601	0	94.50	5.50	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	590	0	92.77	7.23	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	576	0	90.57	9.43	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	562	0	88.36	11.64	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	525	0	82.55	17.45	ASIA	A ₂₂
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	523	0	82.23	17.77	ASIA	Iran-05 ^{FAR-11}
7	A12/UK/119/32 (M10975)	UKG32119	636	520	0	81.76	18.24	EURO-SA	A ₁₂
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	518	0	81.45	18.55	ASIA	Iran-05 ^{FAR-09}
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

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/55/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-14661	
Location: Quang Nam, Vietnam	Topotype: ASIA
Date collected: 09/11/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-55.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 17/12/2013
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 06/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/60/2013	VIT13-60	636	634	0	99.69	0.31	ASIA	Sea-97
2	A/VIT/42/2013	VIT13-42	636	626	0	98.43	1.57	ASIA	Sea-97
3	A/VIT/56/2013	VIT13-56	636	625	0	98.27	1.73	ASIA	Sea-97
4	A/VIT/54/2013	VIT13-54	636	624	0	98.11	1.89	ASIA	Sea-97
5	A/VIT/49/2013	VIT13-49	633	621	0	98.10	1.90	ASIA	Sea-97
6	A/VIT/53/2013	VIT13-53	636	622	0	97.80	2.20	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	636	622	0	97.80	2.20	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	595	0	93.55	6.45	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	595	0	93.55	6.45	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	594	0	93.40	6.60	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	585	0	91.98	8.02	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	569	0	89.47	10.53	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	555	0	87.26	12.74	ASIA	Thai-87
4	A/IRN/2/87 (EF208770)	IRN87-02	633	518	0	81.83	18.17	ASIA	Iran-87
5	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	520	0	81.76	18.24	AFRICA	G-III
6	A22/IRQ/64 (AY593763)	IRQ64--A	636	519	0	81.60	18.40	ASIA	A ₂₂
7	A/IRN/1/96 (EF208771)	IRN96-01	635	517	1	81.42	18.58	ASIA	Iran-96
8	A/IRN/1/2011	IRN11-01	636	517	0	81.29	18.71	ASIA	Iran-05 ^{FAR-11}
9	A/TUR/3/2010	TUR10-03	636	516	0	81.13	18.87	ASIA	Iran-05 ^{KSS-09}
10	A12/UK/119/32 (M10975)	UKG32119	636	516	0	81.13	18.87	EURO-SA	A ₁₂

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: VIT/56/2013 Batch No: WRLFMD/2013/00025 Sender Ref: 13-14731 Location: Long An, Vietnam Date collected: 11/11/2013 Date received by WRLFMD: 26/11/2013 Date received for sequencing: 13/12/2013 Species: Cattle Material used: BTy1 05/12/2013 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 20/12/2013 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: Sea-97 Sequence filename: VIT13-56.SEQ Date sequence last updated: 17/12/2013 No. of Nt determined: 636 No. of ambiguities: 0 Gene length: 636 Total no. of comparisons: 1811 Min. no. of nt for comparison: 600 Total turn-around time: 24 days Sequencing time: 7 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/42/2013	VIT13-42	636	631	0	99.21	0.79	ASIA	Sea-97
2	A/VIT/53/2013	VIT13-53	636	629	0	98.90	1.10	ASIA	Sea-97
3	A/VIT/54/2013	VIT13-54	636	629	0	98.90	1.10	ASIA	Sea-97
4	A/VIT/49/2013	VIT13-49	633	624	0	98.58	1.42	ASIA	Sea-97
5	A/VIT/58/2013	VIT13-58	636	627	0	98.58	1.42	ASIA	Sea-97
6	A/VIT/60/2013	VIT13-60	636	627	0	98.58	1.42	ASIA	Sea-97
7	A/VIT/55/2013	VIT13-55	636	625	0	98.27	1.73	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	602	0	94.65	5.35	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	602	0	94.65	5.35	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	601	0	94.50	5.50	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	590	0	92.77	7.23	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	572	0	89.94	10.06	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	558	0	87.74	12.26	ASIA	Thai-87
4	A/IRN/2/87 (EF208770)	IRN87-02	633	521	0	82.31	17.69	ASIA	Iran-87
5	A22/IRQ/64 (AY593763)	IRQ64--A	636	523	0	82.23	17.77	ASIA	A ₂₂
6	A/IRN/1/2011	IRN11-01	636	522	0	82.08	17.92	ASIA	Iran-05 ^{FAR-11}
7	A/IRN/1/96 (EF208771)	IRN96-01	635	518	1	81.57	18.43	ASIA	Iran-96
8	A/IRN/78/2009	IRN09-78	636	517	0	81.29	18.71	ASIA	Iran-05 ^{FAR-09}
9	A12/UK/119/32 (M10975)	UKG32119	636	516	0	81.13	18.87	EURO-SA	A ₁₂
10	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	516	0	81.13	18.87	AFRICA	G-III

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/58/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-14950	
Location: Quang Nam, Vietnam	Topotype: ASIA
Date collected: 14/11/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-58.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 20/12/2013
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 06/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/42/2013	VIT13-42	636	628	0	98.74	1.26	ASIA	Sea-97
2	A/VIT/56/2013	VIT13-56	636	627	0	98.58	1.42	ASIA	Sea-97
3	A/VIT/54/2013	VIT13-54	636	626	0	98.43	1.57	ASIA	Sea-97
4	A/VIT/53/2013	VIT13-53	636	624	0	98.11	1.89	ASIA	Sea-97
5	A/VIT/60/2013	VIT13-60	636	624	0	98.11	1.89	ASIA	Sea-97
6	A/VIT/49/2013	VIT13-49	633	621	0	98.10	1.90	ASIA	Sea-97
7	A/VIT/55/2013	VIT13-55	636	622	0	97.80	2.20	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	599	0	94.18	5.82	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	599	0	94.18	5.82	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	598	0	94.03	5.97	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	589	0	92.61	7.39	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	572	0	89.94	10.06	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	558	0	87.74	12.26	ASIA	Thai-87
4	A22/IRQ/64 (AY593763)	IRQ64--A	636	521	0	81.92	18.08	ASIA	A ₂₂
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	520	0	81.76	18.24	ASIA	Iran-05 ^{FAR-11}
7	A/GHA/16/73 (KF561698)	GHA73-16	633	513	0	81.04	18.96	AFRICA	G-VI
8	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	515	0	80.97	19.03	AFRICA	G-III
9	A/IRN/1/96 (EF208771)	IRN96-01	635	514	1	80.94	19.06	ASIA	Iran-96
10	A/BAR/6/2008 (FJ755010)	BAR08-06	636	514	0	80.82	19.18	ASIA	Iran-05 ^{BAR-08}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A	Report date: 20/12/2013
WRLFMD Ref No: VIT/60/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2013/00025	Checked by: K. Bachanek-Bankowska
Sender Ref: 13-15003	
Location: Quang nam, Vietnam	Topotype: ASIA
Date collected: 16/11/2013	Genotype/strain: Sea-97
Date received by WRLFMD: 26/11/2013	Sequence filename: VIT13-60.SEQ
Date received for sequencing: 13/12/2013	Date sequence last updated: 17/12/2013
Species: Cattle	No. of Nt determined: 636
Material used: BTy1 06/12/2013	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 636
RT-PCR primers: A-1C562F/EUR-2B52R	Total no. of comparisons: 1811
A-1C612F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 24 days
	Sequencing time: 7 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/55/2013	VIT13-55	636	634	0	99.69	0.31	ASIA	Sea-97
2	A/VIT/42/2013	VIT13-42	636	628	0	98.74	1.26	ASIA	Sea-97
3	A/VIT/56/2013	VIT13-56	636	627	0	98.58	1.42	ASIA	Sea-97
4	A/VIT/54/2013	VIT13-54	636	626	0	98.43	1.57	ASIA	Sea-97
5	A/VIT/49/2013	VIT13-49	633	623	0	98.42	1.58	ASIA	Sea-97
6	A/VIT/53/2013	VIT13-53	636	624	0	98.11	1.89	ASIA	Sea-97
7	A/VIT/58/2013	VIT13-58	636	624	0	98.11	1.89	ASIA	Sea-97
8	A/LAO/17/07* (TRRL)	LAO06-AP	636	597	0	93.87	6.13	ASIA	Sea-97
9	A/LAO/6/07* (TRRL)	LAO06-AF	636	597	0	93.87	6.13	ASIA	Sea-97
10	A/LAO/10/07* (TRRL)	LAO06-AI	636	596	0	93.71	6.29	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	587	0	92.30	7.70	ASIA	Sea-97
2	A/TAI/2/97 (EF208778)	TAI97-02	636	571	0	89.78	10.22	ASIA	Sea-97
3	A/TAI/118/87* (EF208777)	TAI87-AD	636	557	0	87.58	12.42	ASIA	Thai-87
4	A/IRN/2/87 (EF208770)	IRN87-02	633	520	0	82.15	17.85	ASIA	Iran-87
5	A22/IRQ/64 (AY593763)	IRQ64--A	636	521	0	81.92	18.08	ASIA	A ₂₂
6	A21/Lumbwa/KEN/64 (AY593761)	KEN64-AA	636	520	0	81.76	18.24	AFRICA	G-III
7	A/IRN/1/2011	IRN11-01	636	519	0	81.60	18.40	ASIA	Iran-05 ^{FAR-11}
8	A12/UK/119/32 (M10975)	UKG32119	636	518	0	81.45	18.55	EURO-SA	A ₁₂
9	A/IRN/1/96 (EF208771)	IRN96-01	635	517	1	81.42	18.58	ASIA	Iran-96
10	A/TUR/3/2010	TUR10-03	636	516	0	81.13	18.87	ASIA	Iran-05 ^{KSS-09}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Vietnam in 2013

Batch: WRLFMD/2013/00025

◆ indicates viruses in this batch

Software: MEGA 5.2

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 : 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,
20 December 2013

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