

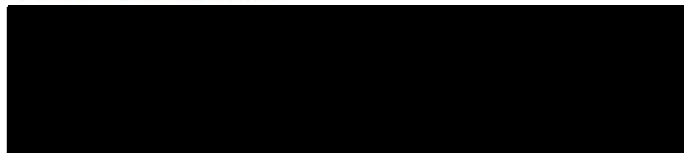


INSTITUTE FOR ANIMAL HEALTH
Director: Professor John Fazakerley BSc, MBA, PhD, FRCPath
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441, Fax: 01483 232621

FMD Genotyping Report

Lab Reference WRL Batch Number: WRLFMD/2012/00019

Sender Details:

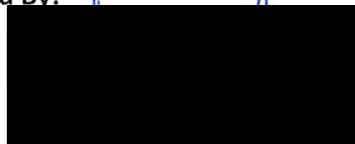


Date Received: 11th May 2012
Country of Origin: MALAYSIA
Date Reported: 28th May 2012

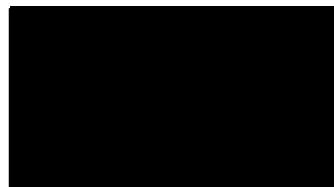
Dear Dr Norlida Bt Othman,

Sequencing work has now been completed in respect of the samples you submitted and the details are as attached. Please note that all of our phylogenetic trees can be accessed via the internet at:
<http://www.wrlfmd.org/>

Results Approved By:

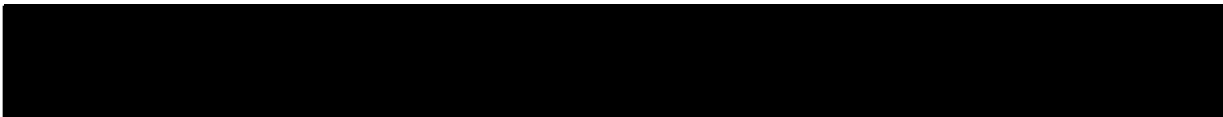


Official Stamp:



Date:

28/5/12



A UKAS accredited testing laboratory No. 4025.

To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratory by fax (+44 (0) 1483 232621 or email: gareth.shimmon@iah.ac.uk. IAH actively seeks and appreciates feedback, if you would like to offer feedback please complete the WRLFMD survey here: <http://www.surveymonkey.com/s/WRLFMD>

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

Genotyping Report

Report Date for this Batch: 25 May 2012

FMDV type O

Country: Malaysia

Period: 2012

No. of samples: 9

BATCH: WRLFMD/2012/000019



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O WRLFMD Ref No: MAY/6/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1460/12 Location: KG Bukit Mok Som, Chalok, Setin, Terenggamu, Malaysia Date collected: 28/03/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 21/05/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-06.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MAY/11/2012	MAY12-11	639	632	0	98.90	1.10	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	632	0	98.90	1.10	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	632	0	98.90	1.10	SEA	Mya-98
4	O/MAY/14/2012	MAY12-14	639	632	0	98.90	1.10	SEA	Mya-98
5	O/MAY/15/2012	MAY12-15	639	632	0	98.90	1.10	SEA	Mya-98
6	O/MAY/16/2012	MAY12-16	639	632	0	98.90	1.10	SEA	Mya-98
7	O/MAY/17/2012	MAY12-17	639	632	0	98.90	1.10	SEA	Mya-98
8	O/MAY/10/2012	MAY12-10	639	631	0	98.75	1.25	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	608	0	95.15	4.85	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	605	0	94.68	5.32	SEA	Mya-98

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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	569	0	89.05	10.95	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	546	0	85.45	14.55	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	539	0	84.35	15.65	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	537	0	84.04	15.96	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	536	0	83.88	16.12	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/88/2009	IRN09-88	639	535	0	83.72	16.28	ME-SA	PanAsia-2 ^{ANT-10}
8	O/TUR/264/2009* (FMDI)	TUR09-AK	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{SAN-09}
9	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
10	O/IRN/18/2010	IRN10-18	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/10/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1785/12 Location: Jln Melaka, Air Molek, Melaka Toygah, Melaka, Malaysia Date collected: 12/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 17/05/2012 Species: Cattle Material used: Epi susp in Trizol Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-10.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 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	O/MAY/11/2012	MAY12-11	639	638	0	99.84	0.16	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	638	0	99.84	0.16	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	638	0	99.84	0.16	SEA	Mya-98
4	O/MAY/14/2012	MAY12-14	639	638	0	99.84	0.16	SEA	Mya-98
5	O/MAY/15/2012	MAY12-15	639	638	0	99.84	0.16	SEA	Mya-98
6	O/MAY/16/2012	MAY12-16	639	638	0	99.84	0.16	SEA	Mya-98
7	O/MAY/17/2012	MAY12-17	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	631	0	98.75	1.25	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	608	0	95.15	4.85	SEA	Mya-98
10	O/MYA/5/2009 (HQ116228)	MYA09-05	639	607	0	94.99	5.01	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	588	0	92.02	7.98	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	566	0	88.58	11.42	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	542	0	84.82	15.18	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	536	0	83.88	16.12	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	533	0	83.41	16.59	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	531	0	83.10	16.90	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	529	0	82.79	17.21	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/11/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1786/12 Location: Jln Melaka, Air Molek, Melaka Toygah, Melaka, Malaysia Date collected: 13/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 21/05/2012 Species: Cattle Material used: RS2 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-11.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/12/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1787/12 Location: JLM Bemban, Merlimau, Jasin, Melaka, Malaysia Date collected: 13/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 21/05/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-12.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O	Report date: 25/05/2012
WRLFMD Ref No: MAY/13/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00019	Checked by: D.P. King
Sender Ref: MVKKB 1961/12 (epithelium)	
Location: KG Dato Wong Seng Chow, Ampang, Seremban, Negeri Sembilan, Malaysia	Topotype: SEA
Date collected: 17/04/2012	Genotype/strain: Mya-98
Date received by WRLFMD: 11/05/2012	Sequence filename: MAY12-13.SEQ
Date received for sequencing: 21/05/2012	Date sequence last updated: 23/05/2012
Species: Cattle	No. of Nt determined: 639
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Total no. of comparisons: 3281
	Min. no. of nt for comparison: 600
	Total turn-around time: 14 days
	Sequencing time: 4 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/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/14/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1961/12 (os in trizol) Location: KG Dato Wong Seng Chow, Ampang, Seremban, Negeri Sembilan, Malaysia Date collected: 17/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 17/05/2012 Species: Cattle Material used: Epi susp in Trizol Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-14.SEQ Date sequence last updated: 25/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 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	O/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/15/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1851/12 Location: KG Bukit Pak Junoh, Rantan Panjamg, Pagir Mas, Kelantan, Malaysia Date collected: 18/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 21/05/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-15.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/16/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 1962/12 Location: LDG BT 3, Rasam, Seremban, Negeri Sembilan, Malaysia Date collected: 23/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 21/05/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R O-1C272F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-16.SEQ Date sequence last updated: 23/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 days Sequencing time: 4 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/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/17/2012	MAY12-17	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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/MYA/7/98 (DQ164925)	MYA98-07	639	589	0	92.18	7.82	SEA	Mya-98
2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*. not a WRLFMD reference number

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Serotype: O WRLFMD Ref No: MAY/17/2012 Batch No: WRLFMD/2012/00019 Sender Ref: MVKKB 2130/12 Location: Mukim Kelemak, Alor Gajah, Melaka, Malaysia Date collected: 28/04/2012 Date received by WRLFMD: 11/05/2012 Date received for sequencing: 17/05/2012 Species: Cattle Material used: Epi susp in Trizol Region sequenced: VP1 RT-PCR primers: O-1C244F/EUR-2B52R	Report date: 25/05/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: SEA Genotype/strain: Mya-98 Sequence filename: MAY12-17.SEQ Date sequence last updated: 25/05/2012 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 3281 Min. no. of nt for comparison: 600 Total turn-around time: 14 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	O/MAY/11/2012	MAY12-11	639	639	0	100.00	0.00	SEA	Mya-98
2	O/MAY/12/2012	MAY12-12	639	639	0	100.00	0.00	SEA	Mya-98
3	O/MAY/13/2012	MAY12-13	639	639	0	100.00	0.00	SEA	Mya-98
4	O/MAY/14/2012	MAY12-14	639	639	0	100.00	0.00	SEA	Mya-98
5	O/MAY/15/2012	MAY12-15	639	639	0	100.00	0.00	SEA	Mya-98
6	O/MAY/16/2012	MAY12-16	639	639	0	100.00	0.00	SEA	Mya-98
7	O/MAY/10/2012	MAY12-10	639	638	0	99.84	0.16	SEA	Mya-98
8	O/MAY/6/2012	MAY12-06	639	632	0	98.90	1.10	SEA	Mya-98
9	O/LAO/101/2009*	LAO09-AF	639	609	0	95.31	4.69	SEA	Mya-98
10	O/GZ/CHA/2010 (JN998086)	CHA10-AY	639	606	0	94.84	5.16	SEA	Mya-98
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2	O/TAI/189/87* (TRRL)	TAI87-AC	639	567	0	88.73	11.27	SEA	unnamed
3	O/CAM/3/98 (AJ294910)	CAM98-03	639	543	0	84.98	15.02	SEA	Cam-94
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	537	0	84.04	15.96	ME-SA	PanAsia-2 ^{TER-08}
5	O/IND/R2/75* (AF204276)	IND75--A	639	534	0	83.57	16.43	ME-SA	unnamed
6	O/PAK/16/2010	PAK10-16	639	534	0	83.57	16.43	ME-SA	PanAsia-2 ^{PUN-10}
7	O/IRN/31/2009	IRN09-31	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/88/2009	IRN09-88	639	533	0	83.41	16.59	ME-SA	PanAsia-2 ^{ANT-10}
9	O/TUR/264/2009* (FMDI)	TUR09-AK	639	532	0	83.26	16.74	ME-SA	PanAsia-2 ^{SAN-09}
10	O/IRN/18/2010	IRN10-18	639	530	0	82.94	17.06	ME-SA	PanAsia-2 ^{BAL-09}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV O in Malaysia in 2012

Batch: WRLFMD/2012/00019

◆ indicates viruses in this batch

Software: MEGA 5.0

Analysis

----- Phylogeny Reconstruction

----- All Selected Taxa

----- Neighbor-joining

Phylogeny Test

----- Bootstrap method

----- 1000

Substitution Model

----- Nucleotide

----- Kimura 2-parameter model

----- d: Transitions + Transversions

Rates and Patterns

----- Uniform rates

----- Same (Homogeneous)

Data Subset to Use

----- Pairwise deletion

----- 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, 25 May 2012

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