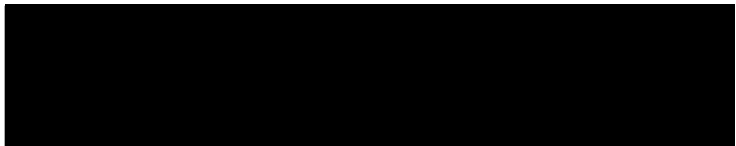




INSTITUTE FOR ANIMAL HEALTH
Director: Professor John Fazakerley BSc, MBA, PhD, FRCPath
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441 Fax: 01483 232621

FMD Genotyping Report

Lab Reference WRL Batch Number: WRLFMD/2012/00027
Sender Details:

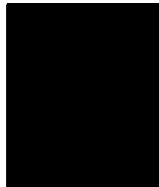


Date Received: 20th July 2012
Country of Origin: Iran
Date Reported: 29th August 2012

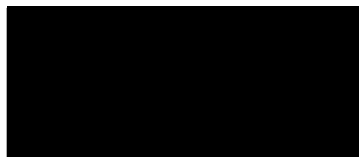
Dear Darab Abdollahi

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/>

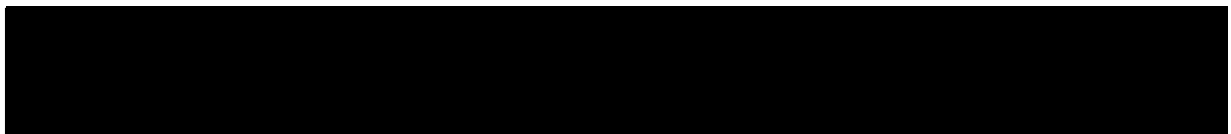
Results Approved By:



Official Stamp:



Date: 29/08/2012



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: 28 August 2012

FMDV type O

Country: Iran

Period: 2012

No. of samples: 2

BATCH: WRLFMD/2012/00027



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FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 28/08/2012
WRLFMD Ref No: IRN/13/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00027	Checked by: D.P. King
Sender Ref: FMD SA 91-6	
Location: Kordestan, Iran	Topotype: ME-SA
Date collected: 17/06/2012	Genotype/strain: PanAsia-2 ^{ANT-10}
Date received by WRLFMD: 20/07/2012	Sequence filename: IRN12-13.SEQ
Date received for sequencing: 08/08/2012	Date sequence last updated: 09/08/2012
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	Total no. of comparisons: 3377
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 39 days
	Sequencing time: 20 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/PAK/1/2010	PAK10-01	639	617	0	96.56	3.44	ME-SA	PanAsia-2 ^{ANT-10}
2	O/PAK/2/2010	PAK10-02	639	617	0	96.56	3.44	ME-SA	PanAsia-2 ^{ANT-10}
3	O/PAK/5/2010	PAK10-05	639	617	0	96.56	3.44	ME-SA	PanAsia-2 ^{ANT-10}
4	O/PAK/8/2010	PAK10-08	639	617	0	96.56	3.44	ME-SA	PanAsia-2 ^{ANT-10}
5	O/AFG/242/2010	AFG10242	630	608	9	96.51	3.49	ME-SA	PanAsia-2 ^{ANT-10}
6	O/IRN/13/2010	IRN10-13	639	616	0	96.40	3.60	ME-SA	PanAsia-2 ^{ANT-10}
7	O/IRN/137/2010	IRN10137	639	616	0	96.40	3.60	ME-SA	PanAsia-2 ^{ANT-10}
8	O/IRN/14/2010	IRN10-14	639	616	0	96.40	3.60	ME-SA	PanAsia-2 ^{ANT-10}
9	O/IRN/30/2010	IRN10-30	639	616	0	96.40	3.60	ME-SA	PanAsia-2 ^{ANT-10}
10	O/IRN/35/2010	IRN10-35	639	616	0	96.40	3.60	ME-SA	PanAsia-2 ^{ANT-10}
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/IRN/88/2009	IRN09-88	639	614	0	96.09	3.91	ME-SA	PanAsia-2 ^{ANT-10}
2	O/IRN/31/2009	IRN09-31	639	593	0	92.80	7.20	ME-SA	PanAsia-2 ^{FAR-09}
3	O/TUR/257/2008* (FMDI)	TUR08-AD	639	591	0	92.49	7.51	ME-SA	PanAsia-2 ^{TER-08}
4	O/IRN/8/2005	IRN05-08	639	589	0	92.18	7.82	ME-SA	PanAsia-2
5	O/TUR/264/2009* (FMDI)	TUR09-AK	639	589	0	92.18	7.82	ME-SA	PanAsia-2 ^{SAN-09}
6	O/IRN/18/2010	IRN10-18	639	586	0	91.71	8.29	ME-SA	PanAsia-2 ^{BAL-09}
7	O/PAK/16/2010	PAK10-16	639	582	0	91.08	8.92	ME-SA	PanAsia-2 ^{PUN-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	579	0	90.61	9.39	ME-SA	PanAsia
9	O/PAK/16/2003 (DQ165068)	PAK03-16	639	564	0	88.26	11.74	ME-SA	Pak-98
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	562	0	87.95	12.05	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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

Page 1 of 1

Serotype: O	Report date: 28/08/2012
WRLFMD Ref No: IRN/21/2012	Reported by: N.J. Knowles
Batch No: WRLFMD/2012/00027	Checked by: D.P. King
Sender Ref: FMD SA-91-5	
Location: Kohgiluyeh and Boyer-Ahmad, Iran	Topotype: ME-SA
Date collected: 02/07/2012	Genotype/strain: PanAsia-2 ^{FAR-09}
Date received by WRLFMD: 20/07/2012	Sequence filename: IRN12-21.SEQ
Date received for sequencing: 08/08/2012	Date sequence last updated: 09/08/2012
Species: Sheep	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: 3377
	Min. no. of nt for comparison: 600
	Total turn-around time: 39 days
	Sequencing time: 20 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/IRN/62/2011	IRN11-62	639	638	0	99.84	0.16	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/77/2011	IRN11-77	639	637	0	99.69	0.31	ME-SA	PanAsia-2 ^{FAR-09}
3	O/IRN/31/2009	IRN09-31	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
4	O/IRN/60/2009	IRN09-60	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
5	O/IRN/71/2011	IRN11-71	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
6	O/SAU/1/2009	SAU09-01	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
7	O/SAU/2/2009	SAU09-02	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
8	O/IRN/41/2009	IRN09-41	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
9	O/IRN/42/2009	IRN09-42	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
10	O/IRN/43/2009	IRN09-43	639	635	0	99.37	0.63	ME-SA	PanAsia-2 ^{FAR-09}
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/IRN/31/2009	IRN09-31	639	636	0	99.53	0.47	ME-SA	PanAsia-2 ^{FAR-09}
2	O/IRN/8/2005	IRN05-08	639	610	0	95.46	4.54	ME-SA	PanAsia-2
3	O/IRN/18/2010	IRN10-18	639	608	0	95.15	4.85	ME-SA	PanAsia-2 ^{BAL-09}
4	O/TUR/257/2008* (FMDI)	TUR08-AD	639	608	0	95.15	4.85	ME-SA	PanAsia-2 ^{TER-08}
5	O/PAK/16/2010	PAK10-16	639	604	0	94.52	5.48	ME-SA	PanAsia-2 ^{PUN-10}
6	O/TUR/264/2009* (FMDI)	TUR09-AK	639	603	0	94.37	5.63	ME-SA	PanAsia-2 ^{SAN-09}
7	O/IRN/88/2009	IRN09-88	639	601	0	94.05	5.95	ME-SA	PanAsia-2 ^{ANT-10}
8	O/UKG/35/2001 (AJ539141)	UKG01-35	639	596	0	93.27	6.73	ME-SA	PanAsia
9	O/KUW/3/97 (DQ164904)	KUW97-03	639	580	0	90.77	9.23	ME-SA	Ind-2001a
10	O/OMN/7/2001 (DQ164941)	OMN01-07	639	580	0	90.77	9.23	ME-SA	Ind-2001b

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v4.1

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Report on FMDV O in Iran in 2012

Batch: WRLFMD/2012/00027

◆ indicates viruses in this batch

Software: MEGA 5.0

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, 28 August 2012

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