

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

Genotyping Report

Report Date for this Batch: 16 November 2015

FMDV type A

Country: Saudi Arabia

Period: 2015

No. of samples: 2

BATCH: WRLFMD/2015/00029



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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 WRLFMD Ref No: SAU/5/2015 Batch No: WRLFMD/2015/00029 Sender Ref: 1/16 & 2/16 Location: Haradh Road, Al Kharj, Central Region, Saudi Arabia Date collected: 16/10/2015 Date received by WRLFMD: 23/10/2015 Date received for sequencing: 10/11/2015 Species: Cattle Material used: BTy1 27/10/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 15/11/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: G-VII Sequence filename: SAU15-05.SEQ Date sequence last updated: 15/11/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2071 Min. no. of nt for comparison: 600 Total turn-around time: 23 days Sequencing time: 5 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/SAU/1/2015	SAU15-01	639	630	0	98.59	1.41	ASIA	G-VII
2	A/SAU/2/2015	SAU15-02	639	630	0	98.59	1.41	ASIA	G-VII
3	A/SAU/3/2015	SAU15-03	639	629	0	98.44	1.56	ASIA	G-VII
4	A/SAU/4/2015	SAU15-04	639	629	0	98.44	1.56	ASIA	G-VII
5	A/SAU/6/2015	SAU15-06	639	628	0	98.28	1.72	ASIA	G-VII
6	A/Van/TUR/203/2015* (FMDI)	TUR15-AA	639	627	0	98.12	1.88	ASIA	G-VII
7	A/BAN/GA/Sa-197/2013 (KJ754939)	BAN13-AB	639	612	0	95.77	4.23	ASIA	G-VII
8	A/IND/161/2003* (HQ832578)	IND03-AD	639	596	0	93.27	6.73	ASIA	G-VII
9	A/IND/447/2005* (HQ832583)	IND05-AR	639	596	0	93.27	6.73	ASIA	G-VII
10	A/BHU/41/2002 (EU414525)	BHU02-41	639	594	0	92.96	7.04	ASIA	G-VII

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/IND/40/2000* (1999,AF390646)	IND00-40	639	575	0	89.98	10.02	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	540	0	84.51	15.49	ASIA	A22
3	A/IRN/1/96 (EF208771)	IRN96-01	638	535	1	83.86	16.14	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	531	0	83.49	16.51	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	529	0	82.79	17.21	EURO-SA	A12
6	A15/Bangkok/TAI/60 (AY593755)	TAI60-D	639	528	0	82.63	17.37	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	525	0	82.55	17.45	ASIA	Iran-99
8	A/AFG/10/2010	AFG10-10	639	524	0	82.00	18.00	ASIA	Iran-05 ^{HER-10}
9	A/IRN/9/2011	IRN11-09	639	524	0	82.00	18.00	ASIA	Iran-05 ^{QAZ-11}
10	A/IRN/125/2010	IRN10125	639	522	0	81.69	18.31	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: SAU/6/2015 Batch No: WRLFMD/2015/00029 Sender Ref: 3/16 Location: Durma, Durma, Riyadh, Central Region, Saudi Arabia Date collected: 21/10/2015 Date received by WRLFMD: 23/10/2015 Date received for sequencing: 10/11/2015 Species: Cattle Material used: BTy1 27/10/2015 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 15/11/2015 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: ASIA Genotype/strain: G-VII Sequence filename: SAU15-06.SEQ Date sequence last updated: 15/11/2015 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2071 Min. no. of nt for comparison: 600 Total turn-around time: 23 days Sequencing time: 5 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/SAU/1/2015	SAU15-01	639	637	0	99.69	0.31	ASIA	G-VII
2	A/SAU/2/2015	SAU15-02	639	637	0	99.69	0.31	ASIA	G-VII
3	A/SAU/3/2015	SAU15-03	639	629	0	98.44	1.56	ASIA	G-VII
4	A/SAU/4/2015	SAU15-04	639	629	0	98.44	1.56	ASIA	G-VII
5	A/SAU/5/2015	SAU15-05	639	628	0	98.28	1.72	ASIA	G-VII
6	A/Van/TUR/203/2015* (FMDI)	TUR15-AA	639	626	0	97.97	2.03	ASIA	G-VII
7	A/BAN/GA/Sa-197/2013 (KJ754939)	BAN13-AB	639	609	0	95.31	4.69	ASIA	G-VII
8	A/IND/161/2003* (HQ832578)	IND03-AD	639	595	0	93.11	6.89	ASIA	G-VII
9	A/IND/249/2004* (HQ832582)	IND04-AF	639	595	0	93.11	6.89	ASIA	G-VII
10	A/IND/243/04* (FJ617245)	IND04-AA	639	594	0	92.96	7.04	ASIA	G-VII
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/IND/40/2000* (1999,AF390646)	IND00-40	639	574	0	89.83	10.17	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64-A	639	541	0	84.66	15.34	ASIA	A22
3	A/IRN/1/96 (EF208771)	IRN96-01	638	536	1	84.01	15.99	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	531	0	83.49	16.51	ASIA	Iran-87
5	A15/Bangkok/TAI/60 (AY593755)	TAI60-D	639	527	0	82.47	17.53	ASIA	A15
6	A/IRN/22/99 (EF208772)	IRN99-22	636	524	0	82.39	17.61	ASIA	Iran-99
7	A12/UK/119/32 (M10975)	UKG32119	639	526	0	82.32	17.68	EURO-SA	A12
8	A/TAI/118/87* (EF208777)	TAI87-AD	636	522	0	82.08	17.92	ASIA	Thai-87
9	A/AFG/10/2010	AFG10-10	639	523	0	81.85	18.15	ASIA	Iran-05 ^{HER-10}
10	A/IRN/9/2011	IRN11-09	639	523	0	81.85	18.15	ASIA	Iran-05 ^{QAZ-11}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Saudi Arabia in 2015

Batch: WRLFMD/2015/00029

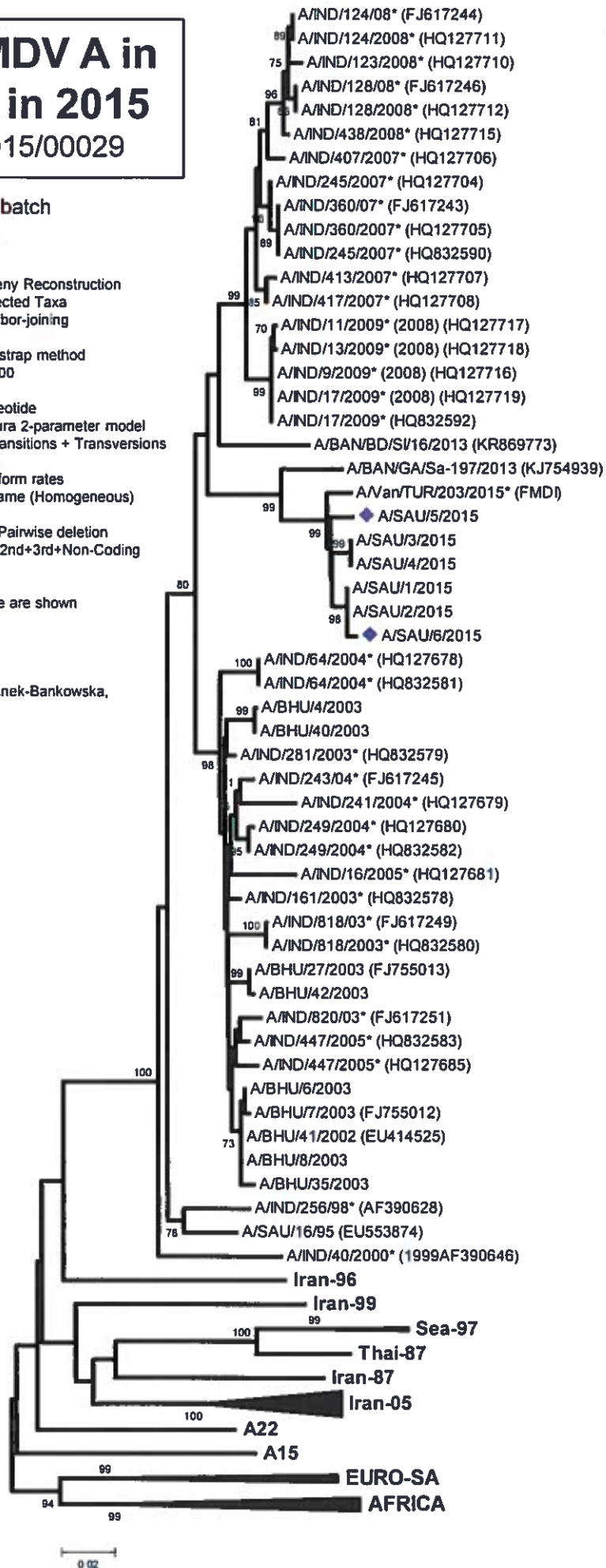
◆ indicates viruses in this batch

Software: MEGA 6.06
 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,
 16 November 2015

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G-VII

ASIA