

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

Genotyping Report

Report Date for this Batch: 15 February 2016

FMDV type A

Country: Saudi Arabia

Period: 2015

No. of samples: 2

BATCH: WRLFMD/2016/00001



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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/7/2015 Batch No: WRLFMD/2016/00001 Sender Ref: 9122 (Al-Danah) Location: Almarai Company, Haradh Rd, Al Kharj, Central, Saudi Arabia Date collected: 23/10/2015 Date received by WRLFMD: 15/01/2016 Date received for sequencing: 11/02/2016 Species: Cattle Material used: BTY1 29/01/2016 Region sequenced: VP1 RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 13/02/2016 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: G-VII Sequence filename: SAU15-07.SEQ Date sequence last updated: 13/02/2016 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2115 Min. no. of nt for comparison: 600 Total turn-around time: 29 days Sequencing time: 2 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/5/2015	SAU15-05	639	638	0	99.84	0.16	ASIA	G-VII
2	A/SAU/8/2015	SAU15-08	639	632	0	98.90	1.10	ASIA	G-VII
3	A/PD78/IND/2015* (PD-FMD)	IND15-AA	639	631	0	98.75	1.25	ASIA	G-VII
4	A/IRN/12/2015	IRN15-12	639	630	0	98.59	1.41	ASIA	G-VII
5	A/IRN/25/2015	IRN15-25	639	630	0	98.59	1.41	ASIA	G-VII
6	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	629	0	98.44	1.56	ASIA	G-VII
7	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	629	0	98.44	1.56	ASIA	G-VII
8	A/SAU/1/2015 (KU127247)	SAU15-01	639	629	0	98.44	1.56	ASIA	G-VII
9	A/SAU/2/2015	SAU15-02	639	629	0	98.44	1.56	ASIA	G-VII
10	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	628	0	98.28	1.72	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	539	0	84.35	15.65	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	534	1	83.70	16.30	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	530	0	83.33	16.67	ASIA	Iran-87
5	A12/UK/119/32 (M10975)	UKG32119	639	528	0	82.63	17.37	EURO-SA	A ₁₂
6	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	527	0	82.47	17.53	ASIA	A15
7	A/IRN/22/99 (EF208772)	IRN99-22	636	524	0	82.39	17.61	ASIA	Iran-99
8	A/AFG/10/2010	AFG10-10	639	525	0	82.16	17.84	ASIA	Iran-05 ^{HER-10}
9	A/IRN/9/2011	IRN11-09	639	523	0	81.85	18.15	ASIA	Iran-05 ^{QAZ-11}
10	A/IRN/125/2010	IRN10125	639	521	0	81.53	18.47	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: A WRLFMD Ref No: SAU/8/2015 Batch No: WRLFMD/2016/00001 Sender Ref: 34866 (Al-Danah) Location: Almarai Company, Haradh Rd, Al Kharj, Central, Saudi Arabia Date collected: 30/12/2015 Date received by WRLFMD: 15/01/2016 Date received for sequencing: 11/02/2016 Species: Cattle Material used: BTY1 30/01/2016 Region sequenced: VPI RT-PCR primers: A-1C562F/EUR-2B52R A-1C612F/EUR-2B52R	Report date: 13/02/2016 Reported by: N.J. Knowles Checked by: D.P. King Topotype: ASIA Genotype/strain: G-VII Sequence filename: SAU15-08.SEQ Date sequence last updated: 13/02/2016 No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639 Total no. of comparisons: 2115 Min. no. of nt for comparison: 600 Total turn-around time: 29 days Sequencing time: 2 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/7/2015	SAU15-07	639	632	0	98.90	1.10	ASIA	G-VII
2	A/SAU/5/2015	SAU15-05	639	631	0	98.75	1.25	ASIA	G-VII
3	A/PD78/IND/2015* (PD-FMD)	IND15-AA	639	624	0	97.65	2.35	ASIA	G-VII
4	A/IRN/12/2015	IRN15-12	639	623	0	97.50	2.50	ASIA	G-VII
5	A/IRN/25/2015	IRN15-25	639	623	0	97.50	2.50	ASIA	G-VII
6	A/ARM/1/2015 (ARRIAH)	ARM15-AA	639	622	0	97.34	2.66	ASIA	G-VII
7	A/ARM/3/2015 (ARRIAH)	ARM15-AC	639	622	0	97.34	2.66	ASIA	G-VII
8	A/SAU/1/2015 (KU127247)	SAU15-01	639	622	0	97.34	2.66	ASIA	G-VII
9	A/SAU/2/2015	SAU15-02	639	622	0	97.34	2.66	ASIA	G-VII
10	A/ARM/2/2015 (ARRIAH)	ARM15-AB	639	621	0	97.18	2.82	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	567	0	88.73	11.27	ASIA	G-VII
2	A22/IRQ/64 (AY593763)	IRQ64--A	639	532	0	83.26	16.74	ASIA	A ₂₂
3	A/IRN/1/96 (EF208771)	IRN96-01	638	529	1	82.92	17.08	ASIA	Iran-96
4	A/IRN/2/87 (EF208770)	IRN87-02	636	523	0	82.23	17.77	ASIA	Iran-87
5	A/IRN/22/99 (EF208772)	IRN99-22	636	521	0	81.92	18.08	ASIA	Iran-99
6	A12/UK/119/32 (M10975)	UKG32119	639	521	0	81.53	18.47	EURO-SA	A ₁₂
7	A15/Bangkok/TAI/60 (AY593755)	TAI60--D	639	521	0	81.53	18.47	ASIA	A15
8	A/AFG/10/2010	AFG10-10	639	520	0	81.38	18.62	ASIA	Iran-05 ^{HER-10}
9	A/IRN/9/2011	IRN11-09	639	518	0	81.06	18.94	ASIA	Iran-05 ^{QAZ-11}
10	A/IRN/125/2010	IRN10125	639	517	0	80.91	19.09	ASIA	Iran-05 ^{SIS-10}

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV A in Saudi Arabia in 2015

Batch: WRLFMD/2016/00001

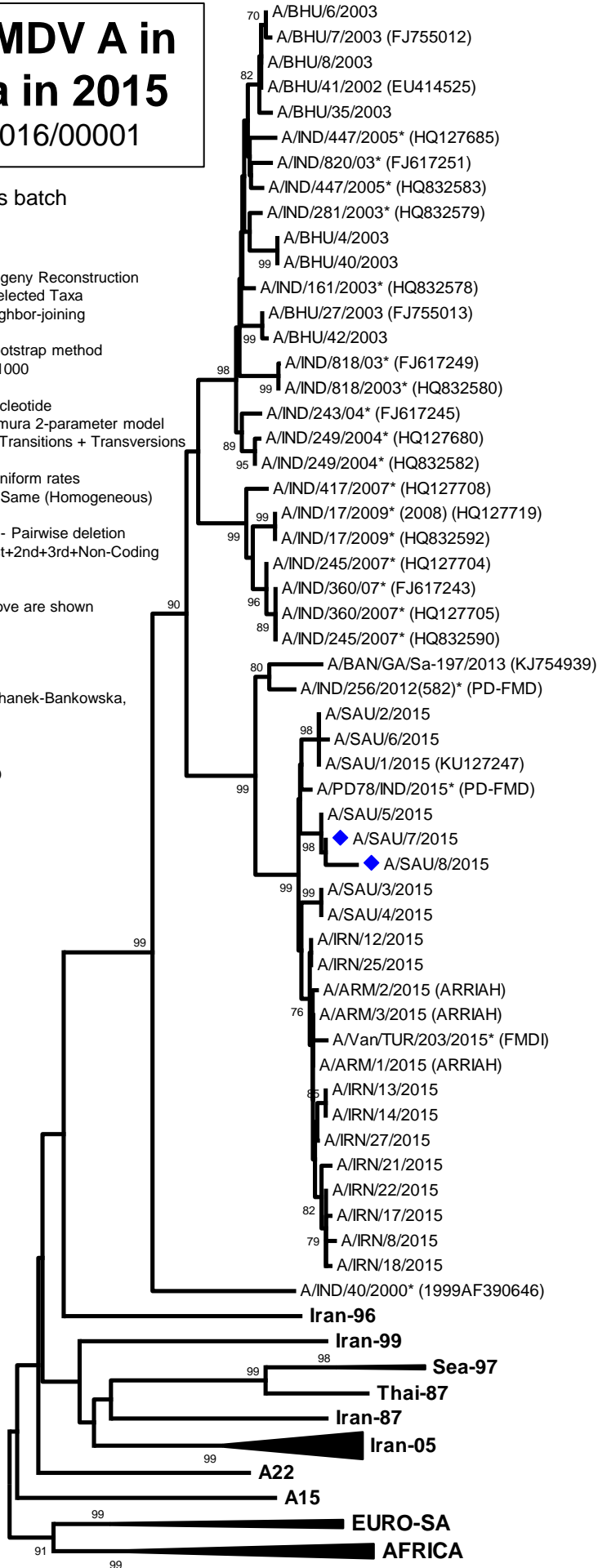
◆ indicates viruses in this batch

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,
 13 February 2016

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G-VII (aka G-18)

ASIA