

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

Genotyping Report

Report Date for this Batch: 11 May 2015

FMDV type SAT 2

Country: Mauritania

Period: 2014

No. of samples: 4

BATCH: WRLFMD/2015/00006



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FAO World Reference Laboratory for FMD Genotyping Report

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

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Serotype: SAT2	Report date: 08/05/2015
WRLFMD Ref No: MAU/1/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: 1. 14/2737	
Location: Boudami Kerkedaye, Tarringuel, Nbout, Gorgol, Mauritania	Topotype: VII
Date collected: 30/12/2014	Genotype/strain: unnamed
Date received by WRLFMD: 13/04/2015	Sequence filename: MAU14-01.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 08/05/2015
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 23/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 689
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 25 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	SAT2/MAU/2/2014	MAU14-02	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/MAU/3/2014	MAU14-03	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/MAU/5/2014	MAU14-05	648	645	0	99.54	0.46	VII	unnamed
4	SAT2/NIG/1/2012	NIG12-01	648	633	0	97.69	2.31	VII	unnamed
5	SAT2/NIG/2/2012	NIG12-02	648	633	0	97.69	2.31	VII	unnamed
6	SAT2/NIG/3/2012	NIG12-03	648	633	0	97.69	2.31	VII	unnamed
7	SAT2/NIG/7/2011	NIG11-07	648	623	0	96.14	3.86	VII	unnamed
8	SAT2/NIG/10/2011	NIG11-10	648	622	0	95.99	4.01	VII	unnamed
9	SAT2/NIG/12/2011	NIG11-12	648	620	0	95.68	4.32	VII	unnamed
10	SAT2/NIG/13/2011	NIG11-13	648	620	0	95.68	4.32	VII	unnamed
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	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	585	0	90.28	9.72	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	581	1	89.80	10.20	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	473	0	73.68	26.32	VIII	unnamed
4	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	477	0	73.61	26.39	VIII	unnamed
5	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	474	0	73.15	26.85	IX	unnamed
6	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	473	1	73.11	26.89	X	unnamed
7	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	473	0	72.99	27.01	IX	unnamed
8	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	471	0	72.69	27.31	XIII	unnamed
9	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	471	0	72.69	27.31	X	unnamed
10	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	469	0	72.38	27.62	XIV	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 08/05/2015
WRLFMD Ref No: MAU/2/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: 2. 14/2737	
Location: Boudami Kerkedaye, Tarringuel, Nbout, Gorgol, Mauritania	Topotype: VII
Date collected: 30/12/2014	Genotype/strain: unnamed
Date received by WRLFMD: 13/04/2015	Sequence filename: MAU14-02.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 08/05/2015
Species: Cattle	No. of Nt determined: 648
Material used: BTy2 24/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 689
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 25 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	SAT2/MAU/1/2014	MAU14-01	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/MAU/3/2014	MAU14-03	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/MAU/5/2014	MAU14-05	648	645	0	99.54	0.46	VII	unnamed
4	SAT2/NIG/1/2012	NIG12-01	648	633	0	97.69	2.31	VII	unnamed
5	SAT2/NIG/2/2012	NIG12-02	648	633	0	97.69	2.31	VII	unnamed
6	SAT2/NIG/3/2012	NIG12-03	648	633	0	97.69	2.31	VII	unnamed
7	SAT2/NIG/7/2011	NIG11-07	648	623	0	96.14	3.86	VII	unnamed
8	SAT2/NIG/10/2011	NIG11-10	648	622	0	95.99	4.01	VII	unnamed
9	SAT2/NIG/12/2011	NIG11-12	648	620	0	95.68	4.32	VII	unnamed
10	SAT2/NIG/13/2011	NIG11-13	648	620	0	95.68	4.32	VII	unnamed
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	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	585	0	90.28	9.72	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	581	1	89.80	10.20	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	473	0	73.68	26.32	VIII	unnamed
4	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	477	0	73.61	26.39	VIII	unnamed
5	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	474	0	73.15	26.85	IX	unnamed
6	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	473	1	73.11	26.89	X	unnamed
7	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	473	0	72.99	27.01	IX	unnamed
8	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	471	0	72.69	27.31	XIII	unnamed
9	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	471	0	72.69	27.31	X	unnamed
10	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	469	0	72.38	27.62	XIV	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 08/05/2015
WRLFMD Ref No: MAU/3/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2015/00006	Checked by: K. Bachanek-Bankowska
Sender Ref: 3. 14/2737	
Location: Boudami Kerkedaye, Tarringuel, Nbout, Gorgol, Mauritania	Topotype: VII
Date collected: 30/12/2014	Genotype/strain: unnamed
Date received by WRLFMD: 13/04/2015	Sequence filename: MAU14-03.SEQ
Date received for sequencing: 30/04/2015	Date sequence last updated: 08/05/2015
Species: Cattle	No. of Nt determined: 648
Material used: BTy2 24/04/2015	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 689
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 25 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	SAT2/MAU/1/2014	MAU14-01	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/MAU/2/2014	MAU14-02	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/MAU/5/2014	MAU14-05	648	645	0	99.54	0.46	VII	unnamed
4	SAT2/NIG/1/2012	NIG12-01	648	633	0	97.69	2.31	VII	unnamed
5	SAT2/NIG/2/2012	NIG12-02	648	633	0	97.69	2.31	VII	unnamed
6	SAT2/NIG/3/2012	NIG12-03	648	633	0	97.69	2.31	VII	unnamed
7	SAT2/NIG/7/2011	NIG11-07	648	623	0	96.14	3.86	VII	unnamed
8	SAT2/NIG/10/2011	NIG11-10	648	622	0	95.99	4.01	VII	unnamed
9	SAT2/NIG/12/2011	NIG11-12	648	620	0	95.68	4.32	VII	unnamed
10	SAT2/NIG/13/2011	NIG11-13	648	620	0	95.68	4.32	VII	unnamed
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3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	473	0	73.68	26.32	VIII	unnamed
4	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	477	0	73.61	26.39	VIII	unnamed
5	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	474	0	73.15	26.85	IX	unnamed
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9	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	471	0	72.69	27.31	X	unnamed
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Location: Boudami Kerkedaye, Tarringuel, Nbout, Gorgol, Mauritania	Topotype: VII
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Region sequenced: VP1	Gene length: 648
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2	SAT2/MAU/2/2014	MAU14-02	648	645	0	99.54	0.46	VII	unnamed
3	SAT2/MAU/3/2014	MAU14-03	648	645	0	99.54	0.46	VII	unnamed
4	SAT2/NIG/1/2012	NIG12-01	648	636	0	98.15	1.85	VII	unnamed
5	SAT2/NIG/2/2012	NIG12-02	648	636	0	98.15	1.85	VII	unnamed
6	SAT2/NIG/3/2012	NIG12-03	648	636	0	98.15	1.85	VII	unnamed
7	SAT2/NIG/7/2011	NIG11-07	648	626	0	96.60	3.40	VII	unnamed
8	SAT2/NIG/10/2011	NIG11-10	648	625	0	96.45	3.55	VII	unnamed
9	SAT2/NIG/12/2011	NIG11-12	648	623	0	96.14	3.86	VII	unnamed
10	SAT2/NIG/13/2011	NIG11-13	648	623	0	96.14	3.86	VII	unnamed
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2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	583	1	90.11	9.89	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	475	0	73.99	26.01	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	476	0	73.46	26.54	IX	unnamed
5	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	476	0	73.46	26.54	VIII	unnamed
6	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	473	0	72.99	27.01	IX	unnamed
7	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	472	1	72.95	27.05	X	unnamed
8	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	472	0	72.84	27.16	XIII	unnamed
9	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	470	0	72.53	27.47	XIV	unnamed
10	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	470	0	72.53	27.47	X	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV SAT 2 in Mauritania in 2014

Batch: WRLFMD/2015/00006

◆ 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 : 651

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,
11 May 2015

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