

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

Genotyping Report

Report Date for this Batch: 15 September 2014

FMDV type SAT 2

Country: Cameroon

Period: 2013

No. of samples: 9

BATCH: WRLFMD/2014/00019



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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 WRLFMD Ref No: CAR/6/2013 Batch No: WRLFMD/2014/00019 Sender Ref: 267 Location: Wakwa, Adamaoua, Cameroon Date collected: 16/07/2013 Date received by WRLFMD: 07/05/2014 Date received for sequencing: 04/09/2014 Species: Cattle Material used: BTy2 15/08/2014 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 15/09/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: VII Genotype/strain: unnamed Sequence filename: CAR13-06.SEQ Date sequence last updated: 15/09/2014 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 673 Min. no. of nt for comparison: 600 Total turn-around time: 131 days Sequencing time: 11 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/CAR/43/2013	CAR13-43	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/CAR/24/2013	CAR13-24	648	644	0	99.38	0.62	VII	unnamed
3	SAT2/CAR/29/2013	CAR13-29	648	644	0	99.38	0.62	VII	unnamed
4	SAT2/CAR/42/2013	CAR13-42	648	644	0	99.38	0.62	VII	unnamed
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	594	1	91.81	8.19	VII	unnamed
6	SAT2/NIG/2/2007 (JX570636)	NIG07-02	648	589	0	90.90	9.10	VII	unnamed
7	SAT2/NIG/5/2008	NIG08-05	648	589	0	90.90	9.10	VII	unnamed
8	SAT2/NIG/6/2008	NIG08-06	648	589	0	90.90	9.10	VII	unnamed
9	SAT2/NIG/7/2008	NIG08-07	648	589	0	90.90	9.10	VII	unnamed
10	SAT2/NIG/1/2008	NIG08-01	648	588	0	90.74	9.26	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/SAU/6/2000 (AF367135)	SAU00A06	647	594	1	91.81	8.19	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	581	0	89.66	10.34	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	483	0	75.23	24.77	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	483	0	74.54	25.46	IX	unnamed
5	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	481	0	74.23	25.77	IX	unnamed
6	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	480	0	74.07	25.93	VIII	unnamed
7	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	478	0	73.77	26.23	XIV	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	474	1	73.26	26.74	X	unnamed
10	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	471	0	72.69	27.31	XII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/12/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 1	
Location: Tignere, Adamaoua, Cameroon	Topotype: VII
Date collected: 18/07/2013	Genotype/strain: Lib-12
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-12.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 21/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/16/2013	CAR13-16	648	648	0	100.00	0.00	VII	Lib-12
2	SAT2/CAR/34/2013	CAR13-34	648	648	0	100.00	0.00	VII	Lib-12
3	SAT2/CAR/37/2013	CAR13-37	648	648	0	100.00	0.00	VII	Lib-12
4	SAT2/LIB/39/2012 (JX570633)	LIB12-39	648	641	0	98.92	1.08	VII	Lib-12
5	SAT2/LIB/40/2012 (JX570634)	LIB12-40	648	641	0	98.92	1.08	VII	Lib-12
6	SAT2/LIB/41/2012 (JX570635)	LIB12-41	648	641	0	98.92	1.08	VII	Lib-12
7	SAT2/CAR/8/2012	CAR12-08	648	640	0	98.77	1.23	VII	Lib-12
8	SAT2/CAR/24/2012	CAR12-24	648	637	0	98.30	1.70	VII	Lib-12
9	SAT2/CAR/78/2012	CAR12-78	648	637	0	98.30	1.70	VII	Lib-12
10	SAT2/CAR/10/2012	CAR12-10	648	636	0	98.15	1.85	VII	Lib-12
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	577	0	89.04	10.96	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	575	1	88.87	11.13	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	479	0	73.92	26.08	IX	unnamed
5	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	479	0	73.92	26.08	XII	unnamed
6	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	477	0	73.61	26.39	IX	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	477	0	73.61	26.39	X	unnamed
8	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	475	0	73.30	26.70	XIV	unnamed
9	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	474	0	73.15	26.85	VIII	unnamed
10	SAT2/NIG/2/75 (AF367139)	NIG75-02	648	470	0	72.53	27.47	V	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/16/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 4	
Location: Karedje, Adamaoua, Cameroon	Topotype: VII
Date collected: 20/07/2013	Genotype/strain: Lib-12
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-16.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 20/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/12/2013	CAR13-12	648	648	0	100.00	0.00	VII	Lib-12
2	SAT2/CAR/34/2013	CAR13-34	648	648	0	100.00	0.00	VII	Lib-12
3	SAT2/CAR/37/2013	CAR13-37	648	648	0	100.00	0.00	VII	Lib-12
4	SAT2/LIB/39/2012 (JX570633)	LIB12-39	648	641	0	98.92	1.08	VII	Lib-12
5	SAT2/LIB/40/2012 (JX570634)	LIB12-40	648	641	0	98.92	1.08	VII	Lib-12
6	SAT2/LIB/41/2012 (JX570635)	LIB12-41	648	641	0	98.92	1.08	VII	Lib-12
7	SAT2/CAR/8/2012	CAR12-08	648	640	0	98.77	1.23	VII	Lib-12
8	SAT2/CAR/24/2012	CAR12-24	648	637	0	98.30	1.70	VII	Lib-12
9	SAT2/CAR/78/2012	CAR12-78	648	637	0	98.30	1.70	VII	Lib-12
10	SAT2/CAR/10/2012	CAR12-10	648	636	0	98.15	1.85	VII	Lib-12
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	577	0	89.04	10.96	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	575	1	88.87	11.13	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	479	0	73.92	26.08	IX	unnamed
5	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	479	0	73.92	26.08	XII	unnamed
6	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	477	0	73.61	26.39	IX	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	477	0	73.61	26.39	X	unnamed
8	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	475	0	73.30	26.70	XIV	unnamed
9	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	474	0	73.15	26.85	VIII	unnamed
10	SAT2/NIG/2/75 (AF367139)	NIG75-02	648	470	0	72.53	27.47	V	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/24/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 297	
Location: Tibati, Adamaoua, Cameroon	Topotype: VII
Date collected: 22/07/2013	Genotype/strain: unnamed
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-24.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy2 15/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/29/2013	CAR13-29	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/CAR/42/2013	CAR13-42	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/CAR/43/2013	CAR13-43	648	644	0	99.38	0.62	VII	unnamed
4	SAT2/CAR/6/2013	CAR13-06	648	644	0	99.38	0.62	VII	unnamed
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
6	SAT2/NIG/2/2007 (JX570636)	NIG07-02	648	589	0	90.90	9.10	VII	unnamed
7	SAT2/NIG/5/2008	NIG08-05	648	589	0	90.90	9.10	VII	unnamed
8	SAT2/NIG/6/2008	NIG08-06	648	589	0	90.90	9.10	VII	unnamed
9	SAT2/NIG/7/2008	NIG08-07	648	589	0	90.90	9.10	VII	unnamed
10	SAT2/CAR/104/2005	CAR05104	648	588	0	90.74	9.26	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/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	585	0	90.28	9.72	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	483	0	75.23	24.77	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	482	0	74.38	25.62	IX	unnamed
5	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	480	0	74.07	25.93	IX	unnamed
6	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	479	0	73.92	26.08	XIV	unnamed
7	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	474	1	73.26	26.74	X	unnamed
10	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	472	0	72.84	27.16	XII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: CAR/29/2013 Batch No: WRLFMD/2014/00019 Sender Ref: 299 Location: Poli, North, Cameroon Date collected: 24/07/2013 Date received by WRLFMD: 07/05/2014 Date received for sequencing: 04/09/2014 Species: Cattle Material used: BTy2 15/08/2014 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 15/09/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: VII Genotype/strain: unnamed Sequence filename: CAR13-29.SEQ Date sequence last updated: 15/09/2014 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 673 Min. no. of nt for comparison: 600 Total turn-around time: 131 days Sequencing time: 11 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/CAR/24/2013	CAR13-24	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/CAR/42/2013	CAR13-42	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/CAR/43/2013	CAR13-43	648	644	0	99.38	0.62	VII	unnamed
4	SAT2/CAR/6/2013	CAR13-06	648	644	0	99.38	0.62	VII	unnamed
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
6	SAT2/NIG/2/2007 (JX570636)	NIG07-02	648	589	0	90.90	9.10	VII	unnamed
7	SAT2/NIG/5/2008	NIG08-05	648	589	0	90.90	9.10	VII	unnamed
8	SAT2/NIG/6/2008	NIG08-06	648	589	0	90.90	9.10	VII	unnamed
9	SAT2/NIG/7/2008	NIG08-07	648	589	0	90.90	9.10	VII	unnamed
10	SAT2/CAR/104/2005	CAR05104	648	588	0	90.74	9.26	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/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	585	0	90.28	9.72	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	483	0	75.23	24.77	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	482	0	74.38	25.62	IX	unnamed
5	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	480	0	74.07	25.93	IX	unnamed
6	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	479	0	73.92	26.08	XIV	unnamed
7	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	474	1	73.26	26.74	X	unnamed
10	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	472	0	72.84	27.16	XII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/34/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 27	
Location: Louggerre, North, Cameroon	Topotype: VII
Date collected: 26/07/2013	Genotype/strain: Lib-12
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-34.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 22/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/12/2013	CAR13-12	648	648	0	100.00	0.00	VII	Lib-12
2	SAT2/CAR/16/2013	CAR13-16	648	648	0	100.00	0.00	VII	Lib-12
3	SAT2/CAR/37/2013	CAR13-37	648	648	0	100.00	0.00	VII	Lib-12
4	SAT2/LIB/39/2012 (JX570633)	LIB12-39	648	641	0	98.92	1.08	VII	Lib-12
5	SAT2/LIB/40/2012 (JX570634)	LIB12-40	648	641	0	98.92	1.08	VII	Lib-12
6	SAT2/LIB/41/2012 (JX570635)	LIB12-41	648	641	0	98.92	1.08	VII	Lib-12
7	SAT2/CAR/8/2012	CAR12-08	648	640	0	98.77	1.23	VII	Lib-12
8	SAT2/CAR/24/2012	CAR12-24	648	637	0	98.30	1.70	VII	Lib-12
9	SAT2/CAR/78/2012	CAR12-78	648	637	0	98.30	1.70	VII	Lib-12
10	SAT2/CAR/10/2012	CAR12-10	648	636	0	98.15	1.85	VII	Lib-12
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	577	0	89.04	10.96	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	575	1	88.87	11.13	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	479	0	73.92	26.08	IX	unnamed
5	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	479	0	73.92	26.08	XII	unnamed
6	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	477	0	73.61	26.39	IX	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	477	0	73.61	26.39	X	unnamed
8	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	475	0	73.30	26.70	XIV	unnamed
9	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	474	0	73.15	26.85	VIII	unnamed
10	SAT2/NIG/2/75 (AF367139)	NIG75-02	648	470	0	72.53	27.47	V	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/37/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 28	
Location: Foukarbewo, Far North, Cameroon	Topotype: VII
Date collected: 28/07/2013	Genotype/strain: Lib-12
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-37.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 22/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/12/2013	CAR13-12	648	648	0	100.00	0.00	VII	Lib-12
2	SAT2/CAR/16/2013	CAR13-16	648	648	0	100.00	0.00	VII	Lib-12
3	SAT2/CAR/34/2013	CAR13-34	648	648	0	100.00	0.00	VII	Lib-12
4	SAT2/LIB/39/2012 (JX570633)	LIB12-39	648	641	0	98.92	1.08	VII	Lib-12
5	SAT2/LIB/40/2012 (JX570634)	LIB12-40	648	641	0	98.92	1.08	VII	Lib-12
6	SAT2/LIB/41/2012 (JX570635)	LIB12-41	648	641	0	98.92	1.08	VII	Lib-12
7	SAT2/CAR/8/2012	CAR12-08	648	640	0	98.77	1.23	VII	Lib-12
8	SAT2/CAR/24/2012	CAR12-24	648	637	0	98.30	1.70	VII	Lib-12
9	SAT2/CAR/78/2012	CAR12-78	648	637	0	98.30	1.70	VII	Lib-12
10	SAT2/CAR/10/2012	CAR12-10	648	636	0	98.15	1.85	VII	Lib-12
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	577	0	89.04	10.96	VII	unnamed
2	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	575	1	88.87	11.13	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	479	0	73.92	26.08	IX	unnamed
5	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	479	0	73.92	26.08	XII	unnamed
6	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	477	0	73.61	26.39	IX	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	477	0	73.61	26.39	X	unnamed
8	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	475	0	73.30	26.70	XIV	unnamed
9	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	474	0	73.15	26.85	VIII	unnamed
10	SAT2/NIG/2/75 (AF367139)	NIG75-02	648	470	0	72.53	27.47	V	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: CAR/42/2013 Batch No: WRLFMD/2014/00019 Sender Ref: 313 Location: North, Cameroon Date collected: 29/07/2013 Date received by WRLFMD: 07/05/2014 Date received for sequencing: 04/09/2014 Species: Cattle Material used: BTy2 15/08/2014 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 15/09/2014 Reported by: N.J. Knowles Checked by: K. Bachanek-Bankowska Topotype: VII Genotype/strain: unnamed Sequence filename: CAR13-42.SEQ Date sequence last updated: 15/09/2014 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 673 Min. no. of nt for comparison: 600 Total turn-around time: 131 days Sequencing time: 11 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/CAR/24/2013	CAR13-24	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/CAR/29/2013	CAR13-29	648	648	0	100.00	0.00	VII	unnamed
3	SAT2/CAR/43/2013	CAR13-43	648	644	0	99.38	0.62	VII	unnamed
4	SAT2/CAR/6/2013	CAR13-06	648	644	0	99.38	0.62	VII	unnamed
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
6	SAT2/NIG/2/2007 (JX570636)	NIG07-02	648	589	0	90.90	9.10	VII	unnamed
7	SAT2/NIG/5/2008	NIG08-05	648	589	0	90.90	9.10	VII	unnamed
8	SAT2/NIG/6/2008	NIG08-06	648	589	0	90.90	9.10	VII	unnamed
9	SAT2/NIG/7/2008	NIG08-07	648	589	0	90.90	9.10	VII	unnamed
10	SAT2/CAR/104/2005	CAR05104	648	588	0	90.74	9.26	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/SAU/6/2000 (AF367135)	SAU00A06	647	596	1	92.12	7.88	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	585	0	90.28	9.72	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	483	0	75.23	24.77	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	482	0	74.38	25.62	IX	unnamed
5	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	480	0	74.07	25.93	IX	unnamed
6	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	479	0	73.92	26.08	XIV	unnamed
7	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	474	1	73.26	26.74	X	unnamed
10	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	472	0	72.84	27.16	XII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2	Report date: 15/09/2014
WRLFMD Ref No: CAR/43/2013	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00019	Checked by: K. Bachanek-Bankowska
Sender Ref: 315	
Location: Kaele, Far North, Cameroon	Topotype: VII
Date collected: 29/07/2013	Genotype/strain: unnamed
Date received by WRLFMD: 07/05/2014	Sequence filename: CAR13-43.SEQ
Date received for sequencing: 04/09/2014	Date sequence last updated: 15/09/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy2 19/08/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 673
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 131 days
	Sequencing time: 11 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/CAR/6/2013	CAR13-06	648	648	0	100.00	0.00	VII	unnamed
2	SAT2/CAR/24/2013	CAR13-24	648	644	0	99.38	0.62	VII	unnamed
3	SAT2/CAR/29/2013	CAR13-29	648	644	0	99.38	0.62	VII	unnamed
4	SAT2/CAR/42/2013	CAR13-42	648	644	0	99.38	0.62	VII	unnamed
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	594	1	91.81	8.19	VII	unnamed
6	SAT2/NIG/2/2007 (JX570636)	NIG07-02	648	589	0	90.90	9.10	VII	unnamed
7	SAT2/NIG/5/2008	NIG08-05	648	589	0	90.90	9.10	VII	unnamed
8	SAT2/NIG/6/2008	NIG08-06	648	589	0	90.90	9.10	VII	unnamed
9	SAT2/NIG/7/2008	NIG08-07	648	589	0	90.90	9.10	VII	unnamed
10	SAT2/NIG/1/2008	NIG08-01	648	588	0	90.74	9.26	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/SAU/6/2000 (AF367135)	SAU00A06	647	594	1	91.81	8.19	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	581	0	89.66	10.34	VII	unnamed
3	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	483	0	75.23	24.77	VIII	unnamed
4	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	483	0	74.54	25.46	IX	unnamed
5	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	481	0	74.23	25.77	IX	unnamed
6	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	480	0	74.07	25.93	VIII	unnamed
7	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	478	0	73.77	26.23	XIV	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	474	1	73.26	26.74	X	unnamed
10	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	471	0	72.69	27.31	XII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV SAT 2 in Cameroon in 2013

Batch: WRLFMD/2014/00019

◆ indicates viruses in this batch

Software: MEGA 6.06

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 : 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,
15 September 2014

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