

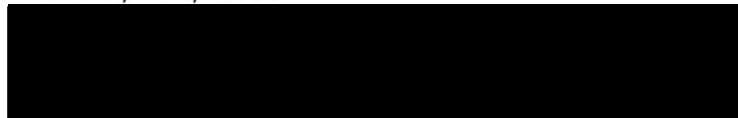


INSTITUTE FOR ANIMAL HEALTH
Director: Professor John Fazakerley BSc, MBA, PhD, FRCPath
PIRBRIGHT LABORATORY
Ash Road,
Pirbright,
Surrey,
GU24 0NF
Intn Tel: 00 44 1483 232441
Tel: 01483 232441, Fax: 01483 232621

FMD Genotyping Report

Lab Reference WRL Batch Number: WRLFMD/2012/00031

Sender Details:



Date Received: 8th August 2012

Country of Origin: TANZANIA

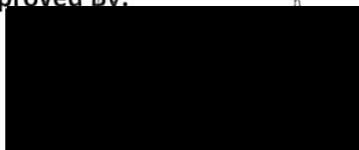
Date Reported: 16th November 2012

Dear Dr S. M. Das,

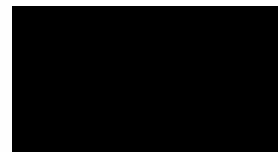
Sequencing work has now been completed in respect of the samples you submitted and the details are as attached. Please note that all of our phylogenetic trees can be accessed via the internet at:

<http://www.wrlfmd.org/>

Results Approved By:

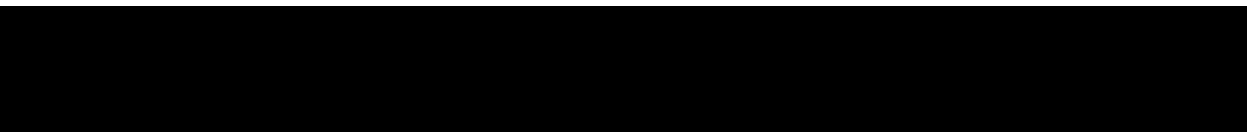


Official Stamp:



Date:

16/11/12



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: trish.ryder@p.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: 9 November 2012

FMDV type SAT 2
Country: Tanzania
Period: 2012
No. of samples: 16

BATCH: WRLFMD/2012/00031



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: SAT2 WRLFMD Ref No: TAN/1/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6510 Location: Tamau, Bunda district, Mara region, Tanzania Date collected: 03/02/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-01.SEQ Date sequence last updated: 11/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/3/2012	TAN12-03	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/37/2012	TAN12-37	648	646	0	99.69	0.31	IV	unnamed
3	SAT2/TAN/10/2012	TAN12-10	648	645	0	99.54	0.46	IV	unnamed
4	SAT2/TAN/32/2012	TAN12-32	648	645	0	99.54	0.46	IV	unnamed
5	SAT2/TAN/34/2012	TAN12-34	648	645	0	99.54	0.46	IV	unnamed
6	SAT2/TAN/36/2012	TAN12-36	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/5/2012	TAN12-05	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/9/2012	TAN12-09	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/KEN/12/2011	KEN11-12	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/KEN/19/2011	KEN11-19	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	564	0	87.04	12.96	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	549	0	84.72	15.28	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	521	0	80.40	19.60	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	515	0	79.48	20.52	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	488	0	75.31	24.69	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: SAT2 WRLFMD Ref No: TAN/3/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6546 Location: Tamau, Bunda district, Mara region, Tanzania Date collected: 04/02/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy2 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-03.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/1/2012	TAN12-01	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/37/2012	TAN12-37	648	646	0	99.69	0.31	IV	unnamed
3	SAT2/TAN/10/2012	TAN12-10	648	645	0	99.54	0.46	IV	unnamed
4	SAT2/TAN/32/2012	TAN12-32	648	645	0	99.54	0.46	IV	unnamed
5	SAT2/TAN/34/2012	TAN12-34	648	645	0	99.54	0.46	IV	unnamed
6	SAT2/TAN/36/2012	TAN12-36	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/5/2012	TAN12-05	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/9/2012	TAN12-09	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/KEN/12/2011	KEN11-12	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/KEN/19/2011	KEN11-19	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	564	0	87.04	12.96	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	549	0	84.72	15.28	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	521	0	80.40	19.60	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	515	0	79.48	20.52	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	488	0	75.31	24.69	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/5/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6584 Location: Parknyigoti, Serengeti district, Mara region, Tanzania Date collected: 29/02/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-05.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/10/2012	TAN12-10	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/32/2012	TAN12-32	648	648	0	100.00	0.00	IV	unnamed
3	SAT2/TAN/9/2012	TAN12-09	648	648	0	100.00	0.00	IV	unnamed
4	SAT2/TAN/14/2012	TAN12-14	648	647	0	99.85	0.15	IV	unnamed
5	SAT2/TAN/13/2012	TAN12-13	648	646	0	99.69	0.31	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/7/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6628 Location: Nattambiso, Serengeti district, Mara region, Tanzania Date collected: 01/03/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-07.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/1/2012	TAN12-01	648	643	0	99.23	0.77	IV	unnamed
2	SAT2/TAN/3/2012	TAN12-03	648	643	0	99.23	0.77	IV	unnamed
3	SAT2/TAN/37/2012	TAN12-37	648	643	0	99.23	0.77	IV	unnamed
4	SAT2/TAN/10/2012	TAN12-10	648	642	0	99.07	0.93	IV	unnamed
5	SAT2/TAN/3/2011	TAN11-03	648	642	0	99.07	0.93	IV	unnamed
6	SAT2/TAN/32/2012	TAN12-32	648	642	0	99.07	0.93	IV	unnamed
7	SAT2/TAN/34/2012	TAN12-34	648	642	0	99.07	0.93	IV	unnamed
8	SAT2/TAN/36/2012	TAN12-36	648	642	0	99.07	0.93	IV	unnamed
9	SAT2/TAN/4/2011	TAN11-04	648	642	0	99.07	0.93	IV	unnamed
10	SAT2/TAN/5/2012	TAN12-05	648	642	0	99.07	0.93	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/MAL/1/2003	MAL03-01	648	517	0	79.78	20.22	I	unnamed
4	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	517	0	79.78	20.22	III	unnamed
5	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	505	0	77.93	22.07	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	504	0	77.78	22.22	I	unnamed
8	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	484	0	74.69	25.31	II	unnamed
9	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	483	0	74.54	25.46	II	unnamed
10	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	478	0	73.77	26.23	V	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/9/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6664 Location: Parknyigoti, Serengeti district, Mara region, Tanzania Date collected: 02/03/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-09.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/10/2012	TAN12-10	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/32/2012	TAN12-32	648	648	0	100.00	0.00	IV	unnamed
3	SAT2/TAN/5/2012	TAN12-05	648	648	0	100.00	0.00	IV	unnamed
4	SAT2/TAN/14/2012	TAN12-14	648	647	0	99.85	0.15	IV	unnamed
5	SAT2/TAN/13/2012	TAN12-13	648	646	0	99.69	0.31	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/10/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 6669 Location: Parknyigoti, Serengeti district, Mara region, Tanzania Date collected: 02/03/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy2 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-10.SEQ Date sequence last updated: 17/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/32/2012	TAN12-32	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/5/2012	TAN12-05	648	648	0	100.00	0.00	IV	unnamed
3	SAT2/TAN/9/2012	TAN12-09	648	648	0	100.00	0.00	IV	unnamed
4	SAT2/TAN/14/2012	TAN12-14	648	647	0	99.85	0.15	IV	unnamed
5	SAT2/TAN/13/2012	TAN12-13	648	646	0	99.69	0.31	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/13/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7016 Location: Nyichoka, Serengeti district, Mara region, Tanzania Date collected: 17/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-13.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/14/2012	TAN12-14	648	647	0	99.85	0.15	IV	unnamed
2	SAT2/TAN/10/2012	TAN12-10	648	646	0	99.69	0.31	IV	unnamed
3	SAT2/TAN/32/2012	TAN12-32	648	646	0	99.69	0.31	IV	unnamed
4	SAT2/TAN/5/2012	TAN12-05	648	646	0	99.69	0.31	IV	unnamed
5	SAT2/TAN/9/2012	TAN12-09	648	646	0	99.69	0.31	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	643	0	99.23	0.77	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	643	0	99.23	0.77	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	643	0	99.23	0.77	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	642	0	99.07	0.93	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	642	0	99.07	0.93	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	546	0	84.26	15.74	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	512	0	79.01	20.99	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	507	0	78.24	21.76	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	505	0	77.93	22.07	I	unnamed
8	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	483	0	74.54	25.46	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/14/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7023 Location: Nyichoka, Serengeti district, Mara region, Tanzania Date collected: 17/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-14.SEQ Date sequence last updated: 11/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/10/2012	TAN12-10	648	647	0	99.85	0.15	IV	unnamed
2	SAT2/TAN/13/2012	TAN12-13	648	647	0	99.85	0.15	IV	unnamed
3	SAT2/TAN/32/2012	TAN12-32	648	647	0	99.85	0.15	IV	unnamed
4	SAT2/TAN/5/2012	TAN12-05	648	647	0	99.85	0.15	IV	unnamed
5	SAT2/TAN/9/2012	TAN12-09	648	647	0	99.85	0.15	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	644	0	99.38	0.62	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	644	0	99.38	0.62	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	644	0	99.38	0.62	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	643	0	99.23	0.77	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	643	0	99.23	0.77	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	560	0	86.42	13.58	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	547	0	84.41	15.59	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	518	0	79.94	20.06	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	515	1	79.60	20.40	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	513	0	79.17	20.83	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	507	0	78.24	21.76	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	506	0	78.09	21.91	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	484	0	74.69	25.31	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	484	0	74.69	25.31	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	477	0	73.61	26.39	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/15/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7052 Location: Nyichoka, Serengeti district, Mara region, Tanzania Date collected: 18/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-15.SEQ Date sequence last updated: 25/09/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/16/2012	TAN12-16	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/10/2012	TAN12-10	648	644	0	99.38	0.62	IV	unnamed
3	SAT2/TAN/32/2012	TAN12-32	648	644	0	99.38	0.62	IV	unnamed
4	SAT2/TAN/5/2012	TAN12-05	648	644	0	99.38	0.62	IV	unnamed
5	SAT2/TAN/9/2012	TAN12-09	648	644	0	99.38	0.62	IV	unnamed
6	SAT2/TAN/14/2012	TAN12-14	648	643	0	99.23	0.77	IV	unnamed
7	SAT2/TAN/13/2012	TAN12-13	648	642	0	99.07	0.93	IV	unnamed
8	SAT2/TAN/1/2012	TAN12-01	648	641	0	98.92	1.08	IV	unnamed
9	SAT2/TAN/3/2012	TAN12-03	648	641	0	98.92	1.08	IV	unnamed
10	SAT2/TAN/37/2012	TAN12-37	648	641	0	98.92	1.08	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	557	0	85.96	14.04	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	546	0	84.26	15.74	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	516	0	79.63	20.37	III	unnamed
4	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
5	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	512	1	79.13	20.87	III	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	509	0	78.55	21.45	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	505	0	77.93	22.07	I	unnamed
8	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	484	0	74.69	25.31	II	unnamed
10	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	472	0	73.52	26.48	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/16/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7055 Location: Nyichoka, Serengeti district, Mara region, Tanzania Date collected: 18/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 13/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-16.SEQ Date sequence last updated: 11/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 57 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/TAN/15/2012	TAN12-15	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/10/2012	TAN12-10	648	644	0	99.38	0.62	IV	unnamed
3	SAT2/TAN/32/2012	TAN12-32	648	644	0	99.38	0.62	IV	unnamed
4	SAT2/TAN/5/2012	TAN12-05	648	644	0	99.38	0.62	IV	unnamed
5	SAT2/TAN/9/2012	TAN12-09	648	644	0	99.38	0.62	IV	unnamed
6	SAT2/TAN/14/2012	TAN12-14	648	643	0	99.23	0.77	IV	unnamed
7	SAT2/TAN/13/2012	TAN12-13	648	642	0	99.07	0.93	IV	unnamed
8	SAT2/TAN/1/2012	TAN12-01	648	641	0	98.92	1.08	IV	unnamed
9	SAT2/TAN/3/2012	TAN12-03	648	641	0	98.92	1.08	IV	unnamed
10	SAT2/TAN/37/2012	TAN12-37	648	641	0	98.92	1.08	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	557	0	85.96	14.04	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	546	0	84.26	15.74	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	516	0	79.63	20.37	III	unnamed
4	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
5	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	512	1	79.13	20.87	III	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	509	0	78.55	21.45	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	505	0	77.93	22.07	I	unnamed
8	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	484	0	74.69	25.31	II	unnamed
10	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	472	0	73.52	26.48	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/18/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7094 Location: Terat, Simanjiro district, Manyara region, Tanzania Date collected: 28/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy2 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-18.SEQ Date sequence last updated: 17/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/19/2012	TAN12-19	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/KEN/12/2011	KEN11-12	648	644	0	99.38	0.62	IV	unnamed
3	SAT2/KEN/19/2011	KEN11-19	648	644	0	99.38	0.62	IV	unnamed
4	SAT2/KEN/21/2011	KEN11-21	648	643	0	99.23	0.77	IV	unnamed
5	SAT2/TAN/3/2011	TAN11-03	648	643	0	99.23	0.77	IV	unnamed
6	SAT2/TAN/4/2011	TAN11-04	648	643	0	99.23	0.77	IV	unnamed
7	SAT2/TAN/6/2011	TAN11-06	648	643	0	99.23	0.77	IV	unnamed
8	SAT2/KEN/20/2011	KEN11-20	648	642	0	99.07	0.93	IV	unnamed
9	SAT2/TAN/7/2011	TAN11-07	648	642	0	99.07	0.93	IV	unnamed
10	SAT2/TAN/8/2011	TAN11-08	648	642	0	99.07	0.93	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	565	0	87.19	12.81	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	552	0	85.19	14.81	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	521	0	80.40	19.60	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	510	0	78.70	21.30	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	488	0	75.31	24.69	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	486	0	75.00	25.00	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	482	0	74.38	25.62	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/19/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7096 Location: Terat, Simanjiro district, Manyara region, Tanzania Date collected: 28/04/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-19.SEQ Date sequence last updated: 17/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/18/2012	TAN12-18	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/KEN/12/2011	KEN11-12	648	644	0	99.38	0.62	IV	unnamed
3	SAT2/KEN/19/2011	KEN11-19	648	644	0	99.38	0.62	IV	unnamed
4	SAT2/KEN/21/2011	KEN11-21	648	643	0	99.23	0.77	IV	unnamed
5	SAT2/TAN/3/2011	TAN11-03	648	643	0	99.23	0.77	IV	unnamed
6	SAT2/TAN/4/2011	TAN11-04	648	643	0	99.23	0.77	IV	unnamed
7	SAT2/TAN/6/2011	TAN11-06	648	643	0	99.23	0.77	IV	unnamed
8	SAT2/KEN/20/2011	KEN11-20	648	642	0	99.07	0.93	IV	unnamed
9	SAT2/TAN/7/2011	TAN11-07	648	642	0	99.07	0.93	IV	unnamed
10	SAT2/TAN/8/2011	TAN11-08	648	642	0	99.07	0.93	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	565	0	87.19	12.81	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	552	0	85.19	14.81	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	521	0	80.40	19.60	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	510	0	78.70	21.30	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	488	0	75.31	24.69	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	486	0	75.00	25.00	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	482	0	74.38	25.62	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/32/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7451 Location: Narakauwo, Simanjiro district, Manyara region, Tanzania Date collected: 05/05/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-32.SEQ Date sequence last updated: 17/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/10/2012	TAN12-10	648	648	0	100.00	0.00	IV	unnamed
2	SAT2/TAN/5/2012	TAN12-05	648	648	0	100.00	0.00	IV	unnamed
3	SAT2/TAN/9/2012	TAN12-09	648	648	0	100.00	0.00	IV	unnamed
4	SAT2/TAN/14/2012	TAN12-14	648	647	0	99.85	0.15	IV	unnamed
5	SAT2/TAN/13/2012	TAN12-13	648	646	0	99.69	0.31	IV	unnamed
6	SAT2/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/37/2012	TAN12-37	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/TAN/15/2012	TAN12-15	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/TAN/16/2012	TAN12-16	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	514	0	79.32	20.68	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/34/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7472 Location: Rwamchanga, Serengeti district, Mara region, Tanzania Date collected: 25/05/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-34.SEQ Date sequence last updated: 17/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
2	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
3	SAT2/TAN/37/2012	TAN12-37	648	645	0	99.54	0.46	IV	unnamed
4	SAT2/TAN/10/2012	TAN12-10	648	644	0	99.38	0.62	IV	unnamed
5	SAT2/TAN/32/2012	TAN12-32	648	644	0	99.38	0.62	IV	unnamed
6	SAT2/TAN/36/2012	TAN12-36	648	644	0	99.38	0.62	IV	unnamed
7	SAT2/TAN/5/2012	TAN12-05	648	644	0	99.38	0.62	IV	unnamed
8	SAT2/TAN/9/2012	TAN12-09	648	644	0	99.38	0.62	IV	unnamed
9	SAT2/KEN/12/2011	KEN11-12	648	643	0	99.23	0.77	IV	unnamed
10	SAT2/KEN/19/2011	KEN11-19	648	643	0	99.23	0.77	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	563	0	86.88	13.12	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	551	0	85.03	14.97	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	520	0	80.25	19.75	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	517	1	79.91	20.09	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	516	0	79.63	20.37	I	unnamed
6	SAT2/ZIM/14/2002	ZIM02-14	648	510	0	78.70	21.30	I	unnamed
7	SAT2/SA/106/59 (AY593848)	RSA59--A	648	509	0	78.55	21.45	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	488	0	75.31	24.69	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	486	0	75.00	25.00	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	481	0	74.23	25.77	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/36/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7494 Location: Rwamchanga, Serengeti district, Mara region, Tanzania Date collected: 27/05/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-36.SEQ Date sequence last updated: 11/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/37/2012	TAN12-37	648	647	0	99.85	0.15	IV	unnamed
2	SAT2/TAN/1/2012	TAN12-01	648	645	0	99.54	0.46	IV	unnamed
3	SAT2/TAN/3/2012	TAN12-03	648	645	0	99.54	0.46	IV	unnamed
4	SAT2/TAN/10/2012	TAN12-10	648	644	0	99.38	0.62	IV	unnamed
5	SAT2/TAN/32/2012	TAN12-32	648	644	0	99.38	0.62	IV	unnamed
6	SAT2/TAN/34/2012	TAN12-34	648	644	0	99.38	0.62	IV	unnamed
7	SAT2/TAN/5/2012	TAN12-05	648	644	0	99.38	0.62	IV	unnamed
8	SAT2/TAN/9/2012	TAN12-09	648	644	0	99.38	0.62	IV	unnamed
9	SAT2/KEN/12/2011	KEN11-12	648	643	0	99.23	0.77	IV	unnamed
10	SAT2/KEN/19/2011	KEN11-19	648	643	0	99.23	0.77	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	561	0	86.57	13.43	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	548	0	84.57	15.43	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	518	0	79.94	20.06	III	unnamed
4	SAT2/MAL/1/2003	MAL03-01	648	516	0	79.63	20.37	I	unnamed
5	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	515	1	79.60	20.40	III	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	506	0	78.09	21.91	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	485	0	74.85	25.15	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	484	0	74.69	25.31	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Serotype: SAT2 WRLFMD Ref No: TAN/37/2012 Batch No: WRLFMD/2012/00031 Sender Ref: 7651 Location: Rwamchanga, Serengeti district, Mara region, Tanzania Date collected: 27/05/2012 Date received by WRLFMD: 08/08/2012 Date received for sequencing: 26/09/2012 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: SAT2-1C445F/SAT-2B208R SAT2-P1-1223F/SAT-2B208R	Report date: 09/11/2012 Reported by: N.J. Knowles Checked by: D.P. King Topotype: IV Genotype/strain: unnamed Sequence filename: TAN12-37.SEQ Date sequence last updated: 11/10/2012 No. of Nt determined: 648 No. of ambiguities: 0 Gene length: 648 Total no. of comparisons: 568 Min. no. of nt for comparison: 600 Total turn-around time: 93 days Sequencing time: 44 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/TAN/36/2012	TAN12-36	648	647	0	99.85	0.15	IV	unnamed
2	SAT2/TAN/1/2012	TAN12-01	648	646	0	99.69	0.31	IV	unnamed
3	SAT2/TAN/3/2012	TAN12-03	648	646	0	99.69	0.31	IV	unnamed
4	SAT2/TAN/10/2012	TAN12-10	648	645	0	99.54	0.46	IV	unnamed
5	SAT2/TAN/32/2012	TAN12-32	648	645	0	99.54	0.46	IV	unnamed
6	SAT2/TAN/34/2012	TAN12-34	648	645	0	99.54	0.46	IV	unnamed
7	SAT2/TAN/5/2012	TAN12-05	648	645	0	99.54	0.46	IV	unnamed
8	SAT2/TAN/9/2012	TAN12-09	648	645	0	99.54	0.46	IV	unnamed
9	SAT2/KEN/12/2011	KEN11-12	648	644	0	99.38	0.62	IV	unnamed
10	SAT2/KEN/19/2011	KEN11-19	648	644	0	99.38	0.62	IV	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/KEN/1/84 (K7/84) (AY344505)	KEN84-AB	648	562	0	86.73	13.27	IV	unnamed
2	SAT2/ETH/1/90 (1989)(AY343935)	ETH90-AA	648	549	0	84.72	15.28	IV	unnamed
3	SAT2/RHO/1/48 (AY593847)	ZAM48B01	648	519	0	80.09	19.91	III	unnamed
4	SAT2/BOT/P3/98 (buffalo 29) (AF367124)	BOT98-AC	647	516	1	79.75	20.25	III	unnamed
5	SAT2/MAL/1/2003	MAL03-01	648	515	0	79.48	20.52	I	unnamed
6	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.40	21.60	I	unnamed
7	SAT2/ZIM/14/2002	ZIM02-14	648	507	0	78.24	21.76	I	unnamed
8	SAT2/ZIM/5/81 (EF134951)	ZIM81-AA	648	486	0	75.00	25.00	II	unnamed
9	SAT2/ZIM/7/83 (AF136607)	ZIM83A07	648	485	0	74.85	25.15	II	unnamed
10	SAT2/RWA/1/2000* (AF367134)	RWA00-01	648	478	0	73.77	26.23	VIII	unnamed

nt, nucleotides

*, not a WRLFMD reference number

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Report on FMDV SAT 2 in Tanzania in 2012

Batch: WRLFMD/2012/00031

◆ indicates viruses in this batch

Software: MEGA 5.1

Analysis

----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

----- Nucleotide

Model/Method ----- Kimura 2-parameter model

Substitutions to Include ----- d: Transitions + Transversions

Rates and Patterns

----- Uniform rates

Pattern among Lineages ----- Same (Homogeneous)

Data Subset to Use

----- Pairwise deletion

Codons Included ----- 1st+2nd+3rd+Non-Coding

No. of Sites : 651

No Of Bootstrap Reps = 1000

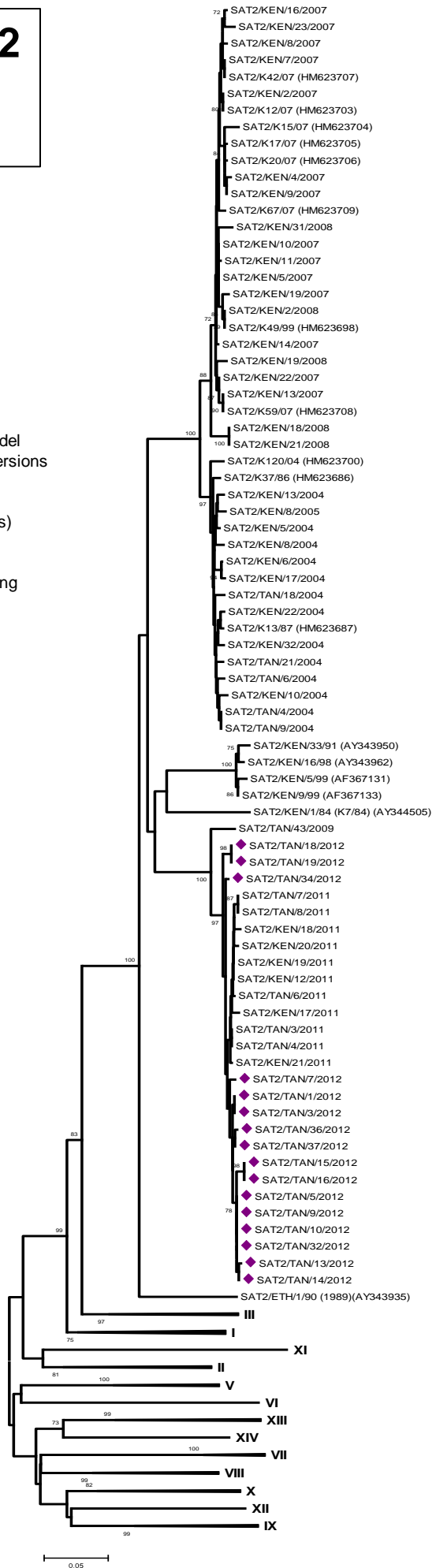
Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 08 November 2012

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