

Serotype: SAT1		Report date: 15/09/2008					
WRL Ref No: ZAM/9/2008		Reported by: N.J. Knowles					
Sender Ref: ZAM 11/08		Checked by: D.P. King					
Date collected: 2008							
Date received by WRLFMD: 01/08/2008		Topotype: Northwest Zimbabwe (NWZ)					
Date received for sequencing: 04/09/2008		Genotype/strain: none designated					
Species: Cattle		Sequence filename: ZAM08-09.SEQ					
Material used: BTy1		Date sequence last updated: 13/09/2008					
Region sequenced: VP1		Total no. of comparisons: 301					
RT-PCR primers: SAT1U-OS/SAT-2B208R; SAT1-1C559F/SAT-2B208R		Min. no. of nt for comparison: 300					
No. of Nt determined: 663		Total turn-around time: 45 days					
No. of ambiguities: 0		Sequencing time: 11 days					
Gene length: 663							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/ZAM/10/2008	ZAM08-10	663	663	0	100	0
2	SAT1/ZAM/11/2008	ZAM08-11	663	663	0	100	0
3	SAT1/ZAM/12/2008	ZAM08-12	663	663	0	100	0
4	SAT1/ZAM/13/2008	ZAM08-13	663	663	0	100	0
5	SAT1/ZAM/5/2008	ZAM08-05	663	657	0	99.1	0.9
6	SAT1/ZAM/6/2008	ZAM08-06	663	657	0	99.1	0.9
7	SAT1/ZAM/7/2008	ZAM08-07	663	657	0	99.1	0.9
8	SAT1/ZAM/5/2004	ZAM04-05	661	626	2	94.7	5.3
9	SAT1/ZAM/1/2005	ZAM05-01	663	627	0	94.57	5.43
10	SAT1/ZAM/16/2004	ZAM04-16	663	627	0	94.57	5.43
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/T155/71	TAN71155	663	576	0	86.88	13.12
2	SAT1/RV/11/37 (AY593839)	RHO37-11	663	514	0	77.53	22.47
3	SAT1/RHO/5/66 (AY593846)	RHO66-05	663	502	0	75.72	24.28
4	SAT1/SAR/9/81	SAR81-09	629	474	11	75.36	24.64
5	SAT1/SWA/40/61	SWA61-40	663	494	0	74.51	25.49
6	SAT1/BOT/1/68 (Z98203)	BOT68-B1	663	489	0	73.76	26.24
7	SAT1/SA/13/61 (AY593842)	SAR61-13	663	487	0	73.45	26.55
8	SAT1/SR/2/58	ZIM58-02	663	486	0	73.3	26.7
9	SAT1/BEC/1/48 (AY593838)	BEC48-01	663	480	0	72.4	27.6
10	SAT1/ISR/4/62 (AY593844)	ISR62-04	663	447	0	67.42	32.58
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: SAT1	Report date: 15/09/2008
WRL Ref No: ZAM/10/2008	Reported by: N.J. Knowles
Sender Ref: ZAM 12/08	Checked by: D.P. King
Date collected: 2008	
Date received by WRLFMD: 01/08/2008	Topotype: Northwest Zimbabwe (NWZ)
Date received for sequencing: 04/09/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: ZAM08-10.SEQ
Material used: BTy1	Date sequence last updated: 13/09/2008
Region sequenced: VP1	Total no. of comparisons: 301
RT-PCR primers: SAT1U-OS/SAT-2B208R; SAT1-1C559F/SAT-2B208R	Min. no. of nt for comparison: 300
No. of Nt determined: 663	Total turn-around time: 45 days
No. of ambiguities: 0	Sequencing time: 11 days
Gene length: 663	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/ZAM/11/2008	ZAM08-11	663	663	0	100	0
2	SAT1/ZAM/12/2008	ZAM08-12	663	663	0	100	0
3	SAT1/ZAM/13/2008	ZAM08-13	663	663	0	100	0
4	SAT1/ZAM/9/2008	ZAM08-09	663	663	0	100	0
5	SAT1/ZAM/5/2008	ZAM08-05	663	657	0	99.1	0.9
6	SAT1/ZAM/6/2008	ZAM08-06	663	657	0	99.1	0.9
7	SAT1/ZAM/7/2008	ZAM08-07	663	657	0	99.1	0.9
8	SAT1/ZAM/5/2004	ZAM04-05	661	626	2	94.7	5.3
9	SAT1/ZAM/1/2005	ZAM05-01	663	627	0	94.57	5.43
10	SAT1/ZAM/16/2004	ZAM04-16	663	627	0	94.57	5.43

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/T155/71	TAN71155	663	576	0	86.88	13.12
2	SAT1/RV/11/37 (AY593839)	RHO37-11	663	514	0	77.53	22.47
3	SAT1/RHO/5/66 (AY593846)	RHO66-05	663	502	0	75.72	24.28
4	SAT1/SAR/9/81	SAR81-09	629	474	11	75.36	24.64
5	SAT1/SWA/40/61	SWA61-40	663	494	0	74.51	25.49
6	SAT1/BOT/1/68 (Z98203)	BOT68-B1	663	489	0	73.76	26.24
7	SAT1/SA/13/61 (AY593842)	SAR61-13	663	487	0	73.45	26.55
8	SAT1/SR/2/58	ZIM58-02	663	486	0	73.3	26.7
9	SAT1/BEC/1/48 (AY593838)	BEC48-01	663	480	0	72.4	27.6
10	SAT1/ISR/4/62 (AY593844)	ISR62-04	663	447	0	67.42	32.58

nt, nucleotides

*, not a WRLFMD reference number

Serotype: SAT1		Report date: 15/09/2008					
WRL Ref No: ZAM/11/2008		Reported by: N.J. Knowles					
Sender Ref: ZAM 13/08		Checked by: D.P. King					
Date collected: 2008							
Date received by WRLFMD: 01/08/2008		Topotype: Northwest Zimbabwe (NWZ)					
Date received for sequencing: 04/09/2008		Genotype/strain: none designated					
Species: Cattle		Sequence filename: ZAM08-11.SEQ					
Material used: BTy1		Date sequence last updated: 13/09/2008					
Region sequenced: VP1		Total no. of comparisons: 301					
RT-PCR primers: SAT1U-OS/SAT-2B208R; SAT1-1C559F/SAT-2B208R		Min. no. of nt for comparison: 300					
No. of Nt determined: 663		Total turn-around time: 45 days					
No. of ambiguities: 0		Sequencing time: 11 days					
Gene length: 663							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/ZAM/10/2008	ZAM08-10	663	663	0	100	0
2	SAT1/ZAM/12/2008	ZAM08-12	663	663	0	100	0
3	SAT1/ZAM/13/2008	ZAM08-13	663	663	0	100	0
4	SAT1/ZAM/9/2008	ZAM08-09	663	663	0	100	0
5	SAT1/ZAM/5/2008	ZAM08-05	663	657	0	99.1	0.9
6	SAT1/ZAM/6/2008	ZAM08-06	663	657	0	99.1	0.9
7	SAT1/ZAM/7/2008	ZAM08-07	663	657	0	99.1	0.9
8	SAT1/ZAM/5/2004	ZAM04-05	661	626	2	94.7	5.3
9	SAT1/ZAM/1/2005	ZAM05-01	663	627	0	94.57	5.43
10	SAT1/ZAM/16/2004	ZAM04-16	663	627	0	94.57	5.43
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/T155/71	TAN71155	663	576	0	86.88	13.12
2	SAT1/RV/11/37 (AY593839)	RHO37-11	663	514	0	77.53	22.47
3	SAT1/RHO/5/66 (AY593846)	RHO66-05	663	502	0	75.72	24.28
4	SAT1/SAR/9/81	SAR81-09	629	474	11	75.36	24.64
5	SAT1/SWA/40/61	SWA61-40	663	494	0	74.51	25.49
6	SAT1/BOT/1/68 (Z98203)	BOT68-B1	663	489	0	73.76	26.24
7	SAT1/SA/13/61 (AY593842)	SAR61-13	663	487	0	73.45	26.55
8	SAT1/SR/2/58	ZIM58-02	663	486	0	73.3	26.7
9	SAT1/BEC/1/48 (AY593838)	BEC48-01	663	480	0	72.4	27.6
10	SAT1/ISR/4/62 (AY593844)	ISR62-04	663	447	0	67.42	32.58
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: SAT1		Report date: 15/09/2008					
WRL Ref No: ZAM/12/2008		Reported by: N.J. Knowles					
Sender Ref: ZAM 14/08		Checked by: D.P. King					
Date collected: 2008							
Date received by WRLFMD: 01/08/2008		Topotype: Northwest Zimbabwe (NWZ)					
Date received for sequencing: 04/09/2008		Genotype/strain: none designated					
Species: Cattle		Sequence filename: ZAM08-12.SEQ					
Material used: BTy1		Date sequence last updated: 13/09/2008					
Region sequenced: VP1		Total no. of comparisons: 301					
RT-PCR primers: SAT1U-OS/SAT-2B208R; SAT1-1C559F/SAT-2B208R		Min. no. of nt for comparison: 300					
No. of Nt determined: 663		Total turn-around time: 45 days					
No. of ambiguities: 0		Sequencing time: 11 days					
Gene length: 663							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/ZAM/10/2008	ZAM08-10	663	663	0	100	0
2	SAT1/ZAM/11/2008	ZAM08-11	663	663	0	100	0
3	SAT1/ZAM/13/2008	ZAM08-13	663	663	0	100	0
4	SAT1/ZAM/9/2008	ZAM08-09	663	663	0	100	0
5	SAT1/ZAM/5/2008	ZAM08-05	663	657	0	99.1	0.9
6	SAT1/ZAM/6/2008	ZAM08-06	663	657	0	99.1	0.9
7	SAT1/ZAM/7/2008	ZAM08-07	663	657	0	99.1	0.9
8	SAT1/ZAM/5/2004	ZAM04-05	661	626	2	94.7	5.3
9	SAT1/ZAM/1/2005	ZAM05-01	663	627	0	94.57	5.43
10	SAT1/ZAM/16/2004	ZAM04-16	663	627	0	94.57	5.43
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/T155/71	TAN71155	663	576	0	86.88	13.12
2	SAT1/RV/11/37 (AY593839)	RHO37-11	663	514	0	77.53	22.47
3	SAT1/RHO/5/66 (AY593846)	RHO66-05	663	502	0	75.72	24.28
4	SAT1/SAR/9/81	SAR81-09	629	474	11	75.36	24.64
5	SAT1/SWA/40/61	SWA61-40	663	494	0	74.51	25.49
6	SAT1/BOT/1/68 (Z98203)	BOT68-B1	663	489	0	73.76	26.24
7	SAT1/SA/13/61 (AY593842)	SAR61-13	663	487	0	73.45	26.55
8	SAT1/SR/2/58	ZIM58-02	663	486	0	73.3	26.7
9	SAT1/BEC/1/48 (AY593838)	BEC48-01	663	480	0	72.4	27.6
10	SAT1/ISR/4/62 (AY593844)	ISR62-04	663	447	0	67.42	32.58
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: SAT1		Report date: 15/09/2008					
WRL Ref No: ZAM/13/2008		Reported by: N.J. Knowles					
Sender Ref: ZAM 15/08		Checked by: D.P. King					
Date collected: 2008							
Date received by WRLFMD: 01/08/2008		Topotype: Northwest Zimbabwe (NWZ)					
Date received for sequencing: 04/09/2008		Genotype/strain: none designated					
Species: Cattle		Sequence filename: ZAM08-13.SEQ					
Material used: BTy1		Date sequence last updated: 13/09/2008					
Region sequenced: VP1		Total no. of comparisons: 301					
RT-PCR primers: SAT1U-OS/SAT-2B208R; SAT1-1C559F/SAT-2B208R		Min. no. of nt for comparison: 300					
No. of Nt determined: 663		Total turn-around time: 45 days					
No. of ambiguities: 0		Sequencing time: 11 days					
Gene length: 663							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/ZAM/10/2008	ZAM08-10	663	663	0	100	0
2	SAT1/ZAM/11/2008	ZAM08-11	663	663	0	100	0
3	SAT1/ZAM/12/2008	ZAM08-12	663	663	0	100	0
4	SAT1/ZAM/9/2008	ZAM08-09	663	663	0	100	0
5	SAT1/ZAM/5/2008	ZAM08-05	663	657	0	99.1	0.9
6	SAT1/ZAM/6/2008	ZAM08-06	663	657	0	99.1	0.9
7	SAT1/ZAM/7/2008	ZAM08-07	663	657	0	99.1	0.9
8	SAT1/ZAM/5/2004	ZAM04-05	661	626	2	94.7	5.3
9	SAT1/ZAM/1/2005	ZAM05-01	663	627	0	94.57	5.43
10	SAT1/ZAM/16/2004	ZAM04-16	663	627	0	94.57	5.43
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT1/T155/71	TAN71155	663	576	0	86.88	13.12
2	SAT1/RV/11/37 (AY593839)	RHO37-11	663	514	0	77.53	22.47
3	SAT1/RHO/5/66 (AY593846)	RHO66-05	663	502	0	75.72	24.28
4	SAT1/SAR/9/81	SAR81-09	629	474	11	75.36	24.64
5	SAT1/SWA/40/61	SWA61-40	663	494	0	74.51	25.49
6	SAT1/BOT/1/68 (Z98203)	BOT68-B1	663	489	0	73.76	26.24
7	SAT1/SA/13/61 (AY593842)	SAR61-13	663	487	0	73.45	26.55
8	SAT1/SR/2/58	ZIM58-02	663	486	0	73.3	26.7
9	SAT1/BEC/1/48 (AY593838)	BEC48-01	663	480	0	72.4	27.6
10	SAT1/ISR/4/62 (AY593844)	ISR62-04	663	447	0	67.42	32.58
nt, nucleotides							
*, not a WRLFMD reference number							

Report on FMDV SAT 1 viruses from Zambia in 2008

Software: MEGA 4.0
 No. of Taxa : 128
 Data File : n:\evd\meg\db\fmv\sat1\ZAM2008b.meg
 Data Title : Zambia 2008
 Data Type : Nucleotide (Coding)
 Analysis : Phylogeny reconstruction
 Tree Inference : =====
 ->Method : Neighbor-Joining
 ->Phylogeny Test and options : Bootstrap (1000 replicates; seed=56677)
 Include Sites : =====
 ->Gaps/Missing Data : Pairwise Deletion
 ->Codon Positions : 1st+2nd+3rd+Noncoding
 Substitution Model : =====
 ->Model : Nucleotide: Kimura 2-parameter
 ->Substitutions to Include : d: Transitions + Transversions
 ->Pattern among Lineages : Same (Homogeneous)
 ->Rates among sites : Uniform rates
 No. of Sites : 663
 No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles, K. Ebert & J. Wadsworth, 14 September 2008

