

Serotype: SAT2		Report date: 22/11/2007					
WRL Ref No: BOT/2/2007							
Sender Ref: BOT 10/07 (1)							
Date collected: 01/10/2007							
Date received by WRLFMD: 13/11/2007				Topotype: none defined			
Date received for sequencing: 20/11/2007				Genotype/strain: none designated			
Species: Cattle				Sequence filename: BOT07-02.SEQ			
Material used: BTy1				Date sequence last updated: 22/11/2007			
Region sequenced: VP1				Total no. of comparisons: 375			
RT-PCR primers: SAT2-1C445F/SAT-2B208R; SAT2-P1-1223F/SAT-2B208R				Min. no. of nt for comparison: 300			
No. of Nt determined: 648				Total turn-around time: 9 days			
No. of ambiguities: 0				Sequencing time: 2 days			
Gene length: 648							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/BOT/3/2007	BOT07-03	648	648	0	100	0
2	SAT2/BOT/5/2007	BOT07-05	648	648	0	100	0
3	SAT2/BOT/6/2007	BOT07-06	648	647	0	99.85	0.15
4	SAT2/BOT/P3/98 (buff 7)	BOW98-04	352	312	19	88.64	11.36
5	SAT2/ZIM/10/2002	ZIM02-10	648	564	0	87.04	12.96
6	SAT2/BOT/P3/98 (buff 29)	BOW98-15	366	318	6	86.89	13.11
7	SAT2/BOT/29/98* (AF367124)	BOT98-AC	647	562	1	86.86	13.14
8	SAT2/BOT/24/2006	BOT06-24	648	561	0	86.57	13.43
9	SAT2/ZIM/1/2004 (BK plaque 1S)	ZIM04A01	648	561	0	86.57	13.43
10	SAT2/ZIM/1/2004 (BK plaque 10L)	ZIM04D01	647	560	1	86.55	13.45
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	530	0	81.79	18.21
2	SAT2/K65/82 (Kenya)	KEN82K65	648	505	0	77.93	22.07
3	SAT2/K183/74 (Kenya)	KEN74183	648	504	0	77.78	22.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	501	0	77.31	22.69
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	484	0	74.69	25.31
6	SAT2/K52/84 (A)	KEN84-AA	648	473	0	72.99	27.01
7	SAT2/KEN/11/60 (AY593849)	KEN60--A	648	469	0	72.38	27.62
8	SAT2/KEN/3/57	KEN57-03	648	465	0	71.76	28.24
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: SAT2 Report date: 22/11/2007
WRL Ref No: BOT/3/2007
Sender Ref: BOT 10/07 (2)
Date collected: 01/10/2007
Date received by WRLFMD: 13/11/2007 Topotype: none defined
Date received for sequencing: 20/11/2007 Genotype/strain: none designated
Species: Cattle Sequence filename: BOT07-03.SEQ
Material used: BTy2 Date sequence last updated: 22/11/2007
Region sequenced: VP1 Total no. of comparisons: 375
RT-PCR primers: SAT2-1C445F/SAT-2B208R; Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R Total turn-around time: 9 days
No. of Nt determined: 648 Sequencing time: 2 days
No. of ambiguities: 0
Gene length: 648

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/BOT/2/2007	BOT07-02	648	648	0	100	0
2	SAT2/BOT/5/2007	BOT07-05	648	648	0	100	0
3	SAT2/BOT/6/2007	BOT07-06	648	647	0	99.85	0.15
4	SAT2/BOT/P3/98 (buff 7)	BOW98-04	352	312	19	88.64	11.36
5	SAT2/ZIM/10/2002	ZIM02-10	648	564	0	87.04	12.96
6	SAT2/BOT/P3/98 (buff 29)	BOW98-15	366	318	6	86.89	13.11
7	SAT2/BOT/29/98* (AF367124)	BOT98-AC	647	562	1	86.86	13.14
8	SAT2/BOT/24/2006	BOT06-24	648	561	0	86.57	13.43
9	SAT2/ZIM/1/2004 (BK plaque 1S)	ZIM04A01	648	561	0	86.57	13.43
10	SAT2/ZIM/1/2004 (BK plaque 10L)	ZIM04D01	647	560	1	86.55	13.45

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	530	0	81.79	18.21
2	SAT2/K65/82 (Kenya)	KEN82K65	648	505	0	77.93	22.07
3	SAT2/K183/74 (Kenya)	KEN74183	648	504	0	77.78	22.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	501	0	77.31	22.69
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	484	0	74.69	25.31
6	SAT2/K52/84 (A)	KEN84-AA	648	473	0	72.99	27.01
7	SAT2/KEN/11/60 (AY593849)	KEN60--A	648	469	0	72.38	27.62
8	SAT2/KEN/3/57	KEN57-03	648	465	0	71.76	28.24

nt, nucleotides

*, not a WRLFMD reference number

Serotype: SAT2		Report date: 22/11/2007					
WRL Ref No: BOT/5/2007							
Sender Ref: BOT 10/07 (4)							
Date collected: 01/10/2007							
Date received by WRLFMD: 13/11/2007				Topotype: none defined			
Date received for sequencing: 20/11/2007				Genotype/strain: none designated			
Species: Cattle				Sequence filename: BOT07-05.SEQ			
Material used: BTy2				Date sequence last updated: 22/11/2007			
Region sequenced: VP1				Total no. of comparisons: 375			
RT-PCR primers: SAT2-1C445F/SAT-2B208R; SAT2-P1-1223F/SAT-2B208R				Min. no. of nt for comparison: 300			
No. of Nt determined: 648				Total turn-around time: 9 days			
No. of ambiguities: 0				Sequencing time: 2 days			
Gene length: 648							
Comments:							
Ten Most Closely Related Viruses							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/BOT/2/2007	BOT07-02	648	648	0	100	0
2	SAT2/BOT/3/2007	BOT07-03	648	648	0	100	0
3	SAT2/BOT/6/2007	BOT07-06	648	647	0	99.85	0.15
4	SAT2/BOT/P3/98 (buff 7)	BOW98-04	352	312	19	88.64	11.36
5	SAT2/ZIM/10/2002	ZIM02-10	648	564	0	87.04	12.96
6	SAT2/BOT/P3/98 (buff 29)	BOW98-15	366	318	6	86.89	13.11
7	SAT2/BOT/29/98* (AF367124)	BOT98-AC	647	562	1	86.86	13.14
8	SAT2/BOT/24/2006	BOT06-24	648	561	0	86.57	13.43
9	SAT2/ZIM/1/2004 (BK plaque 1S)	ZIM04A01	648	561	0	86.57	13.43
10	SAT2/ZIM/1/2004 (BK plaque 10L)	ZIM04D01	647	560	1	86.55	13.45
Relationships to Reference Virus Strains							
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	530	0	81.79	18.21
2	SAT2/K65/82 (Kenya)	KEN82K65	648	505	0	77.93	22.07
3	SAT2/K183/74 (Kenya)	KEN74183	648	504	0	77.78	22.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	501	0	77.31	22.69
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	484	0	74.69	25.31
6	SAT2/K52/84 (A)	KEN84-AA	648	473	0	72.99	27.01
7	SAT2/KEN/11/60 (AY593849)	KEN60--A	648	469	0	72.38	27.62
8	SAT2/KEN/3/57	KEN57-03	648	465	0	71.76	28.24
nt, nucleotides							
*, not a WRLFMD reference number							

Serotype: SAT2 Report date: 22/11/2007
WRL Ref No: BOT/6/2007
Sender Ref: BOT 11/07
Date collected: 01/10/2007
Date received by WRLFMD: 13/11/2007 Topotype: none defined
Date received for sequencing: 20/11/2007 Genotype/strain: none designated
Species: Cattle Sequence filename: BOT07-06.SEQ
Material used: BTy1 Date sequence last updated: 22/11/2007
Region sequenced: VP1 Total no. of comparisons: 375
RT-PCR primers: SAT2-1C445F/SAT-2B208R; Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R Total turn-around time: 9 days
No. of Nt determined: 648 Sequencing time: 2 days
No. of ambiguities: 0
Gene length: 648

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/BOT/2/2007	BOT07-02	648	647	0	99.85	0.15
2	SAT2/BOT/3/2007	BOT07-03	648	647	0	99.85	0.15
3	SAT2/BOT/5/2007	BOT07-05	648	647	0	99.85	0.15
4	SAT2/BOT/P3/98 (buff 7)	BOW98-04	352	312	19	88.64	11.36
5	SAT2/BOT/P3/98 (buff 29)	BOW98-15	366	318	6	86.89	13.11
6	SAT2/ZIM/10/2002	ZIM02-10	648	563	0	86.88	13.12
7	SAT2/BOT/24/2006	BOT06-24	648	562	0	86.73	13.27
8	SAT2/BOT/29/98* (AF367124)	BOT98-AC	647	561	1	86.71	13.29
9	SAT2/ZIM/1/2004 (BK plaque 1S)	ZIM04A01	648	560	0	86.42	13.58
10	SAT2/ZIM/1/2004 (BK plaque 10L)	ZIM04D01	647	559	1	86.4	13.6

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	529	0	81.64	18.36
2	SAT2/K183/74 (Kenya)	KEN74183	648	505	0	77.93	22.07
3	SAT2/K65/82 (Kenya)	KEN82K65	648	504	0	77.78	22.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	502	0	77.47	22.53
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	485	0	74.85	25.15
6	SAT2/K52/84 (A)	KEN84-AA	648	472	0	72.84	27.16
7	SAT2/KEN/11/60 (AY593849)	KEN60--A	648	468	0	72.22	27.78
8	SAT2/KEN/3/57	KEN57-03	648	464	0	71.6	28.4

nt, nucleotides

*, not a WRLFMD reference number

Report on FMDV SAT2 in Botswana in 2007

No. of Taxa : 104

Data File : n:\evd\meg\db\fm\sv\bot2007a.meg

Data Title : Botswana 2007

Data Type : Nucleotide (Coding)

Analysis : Phylogeny reconstruction

Tree Inference : =====

Method : Neighbor-Joining

Phylogeny Test and options : Bootstrap (1000 replicates; seed=12757)

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

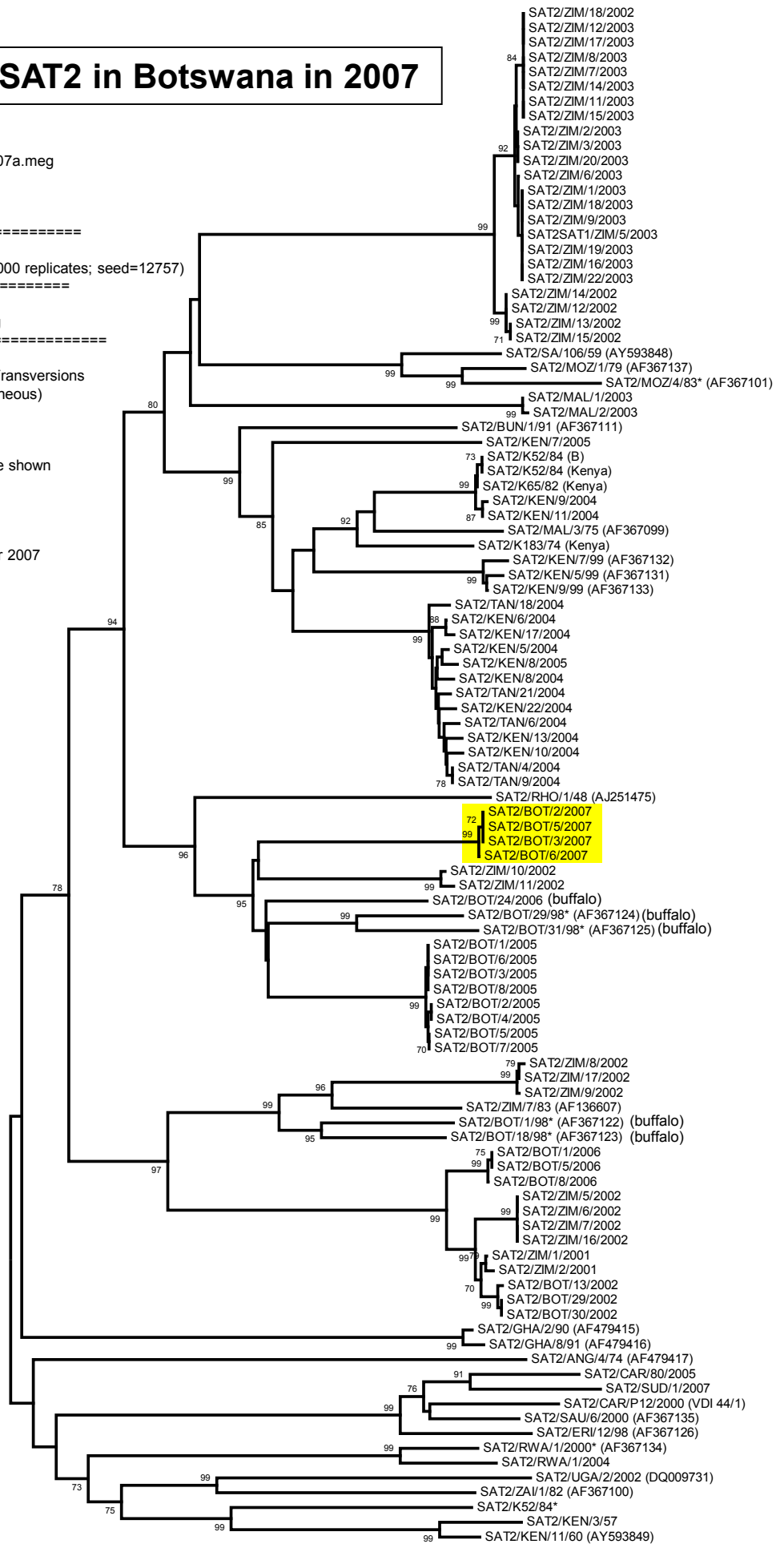
No. of Sites : 648

No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

*, not a WRLFMD reference number

N.J. Knowles & J. Wadsworth, 22 November 2007



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