

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/2/2007	Reported by: N.J. Knowles
Sender Ref: K12/07	Checked by: D.P. King
Date collected: 16/04/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-02.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/7/2007	KEN07-07	648	645	0	99.54	0.46
2	SAT2/KEN/10/2007	KEN07-10	648	644	0	99.38	0.62
3	SAT2/KEN/14/2007	KEN07-14	648	644	0	99.38	0.62
4	SAT2/KEN/16/2007	KEN07-16	648	644	0	99.38	0.62
5	SAT2/KEN/5/2007	KEN07-05	648	644	0	99.38	0.62
6	SAT2/KEN/8/2007	KEN07-08	648	644	0	99.38	0.62
7	SAT2/KEN/11/2007	KEN07-11	648	643	0	99.23	0.77
8	SAT2/KEN/22/2007	KEN07-22	648	643	0	99.23	0.77
9	SAT2/KEN/9/2007	KEN07-09	648	642	0	99.07	0.93
10	SAT2/KEN/13/2007	KEN07-13	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
2	SAT2/K52/84 (Kenya)	KEN84K52	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	488	0	75.31	24.69
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	469	0	72.38	27.62
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/4/2007	Reported by: N.J. Knowles
Sender Ref: K35/07	Checked by: D.P. King
Date collected: 25/06/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-04.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/9/2007	KEN07-09	648	646	0	99.69	0.31
2	SAT2/KEN/7/2007	KEN07-07	648	641	0	98.92	1.08
3	SAT2/KEN/10/2007	KEN07-10	648	640	0	98.77	1.23
4	SAT2/KEN/14/2007	KEN07-14	648	640	0	98.77	1.23
5	SAT2/KEN/16/2007	KEN07-16	648	640	0	98.77	1.23
6	SAT2/KEN/2/2007	KEN07-02	648	640	0	98.77	1.23
7	SAT2/KEN/5/2007	KEN07-05	648	640	0	98.77	1.23
8	SAT2/KEN/8/2007	KEN07-08	648	640	0	98.77	1.23
9	SAT2/KEN/11/2007	KEN07-11	648	639	0	98.61	1.39
10	SAT2/KEN/22/2007	KEN07-22	648	639	0	98.61	1.39

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	565	0	87.19	12.81
2	SAT2/K183/74 (Kenya)	KEN74183	648	564	0	87.04	12.96
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	515	0	79.48	20.52
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	512	0	79.01	20.99
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	489	0	75.46	24.54
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	474	0	73.15	26.85
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	466	0	71.91	28.09
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	460	0	70.99	29.01
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/5/2007	Reported by: N.J. Knowles
Sender Ref: K40/07	Checked by: D.P. King
Date collected: 26/06/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-05.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/10/2007	KEN07-10	648	648	0	100	0
2	SAT2/KEN/11/2007	KEN07-11	648	647	0	99.85	0.15
3	SAT2/KEN/14/2007	KEN07-14	648	646	0	99.69	0.31
4	SAT2/KEN/2/2008	KEN08-02	648	645	0	99.54	0.46
5	SAT2/KEN/22/2007	KEN07-22	648	645	0	99.54	0.46
6	SAT2/KEN/2/2007	KEN07-02	648	644	0	99.38	0.62
7	SAT2/KEN/13/2007	KEN07-13	648	643	0	99.23	0.77
8	SAT2/KEN/19/2007	KEN07-19	648	643	0	99.23	0.77
9	SAT2/KEN/7/2007	KEN07-07	648	643	0	99.23	0.77
10	SAT2/KEN/16/2007	KEN07-16	648	642	0	99.07	0.93

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	568	0	87.65	12.35
2	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	520	0	80.25	19.75
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	487	0	75.15	24.85
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	471	1	72.8	27.2
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	464	0	71.6	28.4
10	SAT2/KEN/3/57	KEN57-03	648	458	0	70.68	29.32

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/7/2007	Reported by: N.J. Knowles
Sender Ref: K41/07	Checked by: D.P. King
Date collected: 01/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-07.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/16/2007	KEN07-16	648	645	0	99.54	0.46
2	SAT2/KEN/2/2007	KEN07-02	648	645	0	99.54	0.46
3	SAT2/KEN/8/2007	KEN07-08	648	645	0	99.54	0.46
4	SAT2/KEN/10/2007	KEN07-10	648	643	0	99.23	0.77
5	SAT2/KEN/14/2007	KEN07-14	648	643	0	99.23	0.77
6	SAT2/KEN/5/2007	KEN07-05	648	643	0	99.23	0.77
7	SAT2/KEN/9/2007	KEN07-09	648	643	0	99.23	0.77
8	SAT2/KEN/11/2007	KEN07-11	648	642	0	99.07	0.93
9	SAT2/KEN/22/2007	KEN07-22	648	642	0	99.07	0.93
10	SAT2/KEN/23/2007	KEN07-23	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
2	SAT2/K52/84 (Kenya)	KEN84K52	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	488	0	75.31	24.69
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	466	0	71.91	28.09
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/8/2007	Reported by: N.J. Knowles
Sender Ref: K47/07	Checked by: D.P. King
Date collected: 09/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-08.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/7/2007	KEN07-07	648	645	0	99.54	0.46
2	SAT2/KEN/16/2007	KEN07-16	648	644	0	99.38	0.62
3	SAT2/KEN/2/2007	KEN07-02	648	644	0	99.38	0.62
4	SAT2/KEN/10/2007	KEN07-10	648	642	0	99.07	0.93
5	SAT2/KEN/14/2007	KEN07-14	648	642	0	99.07	0.93
6	SAT2/KEN/5/2007	KEN07-05	648	642	0	99.07	0.93
7	SAT2/KEN/9/2007	KEN07-09	648	642	0	99.07	0.93
8	SAT2/KEN/11/2007	KEN07-11	648	641	0	98.92	1.08
9	SAT2/KEN/22/2007	KEN07-22	648	641	0	98.92	1.08
10	SAT2/KEN/23/2007	KEN07-23	648	640	0	98.77	1.23

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
2	SAT2/K52/84 (Kenya)	KEN84K52	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	517	0	79.78	20.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	509	0	78.55	21.45
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	486	0	75	25
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	475	0	73.3	26.7
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	469	1	72.49	27.51
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	462	0	71.3	28.7
10	SAT2/KEN/3/57	KEN57-03	648	455	0	70.22	29.78

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/9/2007	Reported by: N.J. Knowles
Sender Ref: K49/07	Checked by: D.P. King
Date collected: 10/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-09.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/4/2007	KEN07-04	648	646	0	99.69	0.31
2	SAT2/KEN/7/2007	KEN07-07	648	643	0	99.23	0.77
3	SAT2/KEN/10/2007	KEN07-10	648	642	0	99.07	0.93
4	SAT2/KEN/14/2007	KEN07-14	648	642	0	99.07	0.93
5	SAT2/KEN/16/2007	KEN07-16	648	642	0	99.07	0.93
6	SAT2/KEN/2/2007	KEN07-02	648	642	0	99.07	0.93
7	SAT2/KEN/5/2007	KEN07-05	648	642	0	99.07	0.93
8	SAT2/KEN/8/2007	KEN07-08	648	642	0	99.07	0.93
9	SAT2/KEN/11/2007	KEN07-11	648	641	0	98.92	1.08
10	SAT2/KEN/22/2007	KEN07-22	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
2	SAT2/K52/84 (Kenya)	KEN84K52	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	517	0	79.78	20.22
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	512	0	79.01	20.99
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	489	0	75.46	24.54
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	466	0	71.91	28.09
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	460	0	70.99	29.01
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/10/2007	Reported by: N.J. Knowles
Sender Ref: K52/07	Checked by: D.P. King
Date collected: 16/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-10.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/5/2007	KEN07-05	648	648	0	100	0
2	SAT2/KEN/11/2007	KEN07-11	648	647	0	99.85	0.15
3	SAT2/KEN/14/2007	KEN07-14	648	646	0	99.69	0.31
4	SAT2/KEN/2/2008	KEN08-02	648	645	0	99.54	0.46
5	SAT2/KEN/22/2007	KEN07-22	648	645	0	99.54	0.46
6	SAT2/KEN/2/2007	KEN07-02	648	644	0	99.38	0.62
7	SAT2/KEN/13/2007	KEN07-13	648	643	0	99.23	0.77
8	SAT2/KEN/19/2007	KEN07-19	648	643	0	99.23	0.77
9	SAT2/KEN/7/2007	KEN07-07	648	643	0	99.23	0.77
10	SAT2/KEN/16/2007	KEN07-16	648	642	0	99.07	0.93

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	568	0	87.65	12.35
2	SAT2/K183/74 (Kenya)	KEN74183	648	566	0	87.35	12.65
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	520	0	80.25	19.75
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	487	0	75.15	24.85
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	471	1	72.8	27.2
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	464	0	71.6	28.4
10	SAT2/KEN/3/57	KEN57-03	648	458	0	70.68	29.32

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/11/2007	Reported by: N.J. Knowles
Sender Ref: K56/07	Checked by: D.P. King
Date collected: 23/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-11.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/10/2007	KEN07-10	648	647	0	99.85	0.15
2	SAT2/KEN/5/2007	KEN07-05	648	647	0	99.85	0.15
3	SAT2/KEN/14/2007	KEN07-14	648	645	0	99.54	0.46
4	SAT2/KEN/2/2008	KEN08-02	648	644	0	99.38	0.62
5	SAT2/KEN/22/2007	KEN07-22	648	644	0	99.38	0.62
6	SAT2/KEN/2/2007	KEN07-02	648	643	0	99.23	0.77
7	SAT2/KEN/13/2007	KEN07-13	648	642	0	99.07	0.93
8	SAT2/KEN/19/2007	KEN07-19	648	642	0	99.07	0.93
9	SAT2/KEN/7/2007	KEN07-07	648	642	0	99.07	0.93
10	SAT2/KEN/16/2007	KEN07-16	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	567	0	87.5	12.5
2	SAT2/K183/74 (Kenya)	KEN74183	648	565	0	87.19	12.81
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	510	0	78.7	21.3
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	486	0	75	25
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	466	0	71.91	28.09
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number



Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/13/2007	Reported by: N.J. Knowles
Sender Ref: K59/07	Checked by: D.P. King
Date collected: 25/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-13.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/22/2007	KEN07-22	648	646	0	99.69	0.31
2	SAT2/KEN/10/2007	KEN07-10	648	643	0	99.23	0.77
3	SAT2/KEN/14/2007	KEN07-14	648	643	0	99.23	0.77
4	SAT2/KEN/5/2007	KEN07-05	648	643	0	99.23	0.77
5	SAT2/KEN/11/2007	KEN07-11	648	642	0	99.07	0.93
6	SAT2/KEN/2/2007	KEN07-02	648	641	0	98.92	1.08
7	SAT2/KEN/2/2008	KEN08-02	648	640	0	98.77	1.23
8	SAT2/KEN/7/2007	KEN07-07	648	640	0	98.77	1.23
9	SAT2/KEN/16/2007	KEN07-16	648	639	0	98.61	1.39
10	SAT2/KEN/8/2007	KEN07-08	648	639	0	98.61	1.39

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	567	0	87.5	12.5
2	SAT2/K183/74 (Kenya)	KEN74183	648	563	0	86.88	13.12
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	521	0	80.4	19.6
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	514	0	79.32	20.68
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	486	0	75	25
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	474	1	73.26	26.74
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	462	0	71.3	28.7
10	SAT2/KEN/3/57	KEN57-03	648	460	0	70.99	29.01

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/14/2007	Reported by: N.J. Knowles
Sender Ref: K60/07	Checked by: D.P. King
Date collected: 31/07/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-14.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/10/2007	KEN07-10	648	646	0	99.69	0.31
2	SAT2/KEN/5/2007	KEN07-05	648	646	0	99.69	0.31
3	SAT2/KEN/11/2007	KEN07-11	648	645	0	99.54	0.46
4	SAT2/KEN/22/2007	KEN07-22	648	645	0	99.54	0.46
5	SAT2/KEN/2/2007	KEN07-02	648	644	0	99.38	0.62
6	SAT2/KEN/13/2007	KEN07-13	648	643	0	99.23	0.77
7	SAT2/KEN/2/2008	KEN08-02	648	643	0	99.23	0.77
8	SAT2/KEN/7/2007	KEN07-07	648	643	0	99.23	0.77
9	SAT2/KEN/16/2007	KEN07-16	648	642	0	99.07	0.93
10	SAT2/KEN/8/2007	KEN07-08	648	642	0	99.07	0.93

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	568	0	87.65	12.35
2	SAT2/K183/74 (Kenya)	KEN74183	648	567	0	87.5	12.5
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	511	0	78.86	21.14
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	487	0	75.15	24.85
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	471	1	72.8	27.2
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/16/2007	Reported by: N.J. Knowles
Sender Ref: K71/07	Checked by: D.P. King
Date collected: 17/08/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-16.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/7/2007	KEN07-07	648	645	0	99.54	0.46
2	SAT2/KEN/2/2007	KEN07-02	648	644	0	99.38	0.62
3	SAT2/KEN/8/2007	KEN07-08	648	644	0	99.38	0.62
4	SAT2/KEN/10/2007	KEN07-10	648	642	0	99.07	0.93
5	SAT2/KEN/14/2007	KEN07-14	648	642	0	99.07	0.93
6	SAT2/KEN/23/2007	KEN07-23	648	642	0	99.07	0.93
7	SAT2/KEN/5/2007	KEN07-05	648	642	0	99.07	0.93
8	SAT2/KEN/9/2007	KEN07-09	648	642	0	99.07	0.93
9	SAT2/KEN/11/2007	KEN07-11	648	641	0	98.92	1.08
10	SAT2/KEN/22/2007	KEN07-22	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K183/74 (Kenya)	KEN74183	648	564	0	87.04	12.96
2	SAT2/K52/84 (Kenya)	KEN84K52	648	564	0	87.04	12.96
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	509	0	78.55	21.45
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	489	0	75.46	24.54
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	457	0	70.52	29.48

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/19/2007	Reported by: N.J. Knowles
Sender Ref: K80/07	Checked by: D.P. King
Date collected: 26/09/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-19.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/2/2008	KEN08-02	648	644	0	99.38	0.62
2	SAT2/KEN/10/2007	KEN07-10	648	643	0	99.23	0.77
3	SAT2/KEN/5/2007	KEN07-05	648	643	0	99.23	0.77
4	SAT2/KEN/11/2007	KEN07-11	648	642	0	99.07	0.93
5	SAT2/KEN/14/2007	KEN07-14	648	641	0	98.92	1.08
6	SAT2/KEN/22/2007	KEN07-22	648	640	0	98.77	1.23
7	SAT2/KEN/2/2007	KEN07-02	648	639	0	98.61	1.39
8	SAT2/KEN/13/2007	KEN07-13	648	638	0	98.46	1.54
9	SAT2/KEN/7/2007	KEN07-07	648	638	0	98.46	1.54
10	SAT2/KEN/16/2007	KEN07-16	648	637	0	98.3	1.7

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	563	0	86.88	13.12
2	SAT2/K183/74 (Kenya)	KEN74183	648	561	0	86.57	13.43
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	515	0	79.48	20.52
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	507	0	78.24	21.76
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	485	0	74.85	25.15
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	456	0	70.37	29.63

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/22/2007	Reported by: N.J. Knowles
Sender Ref: K93/07	Checked by: D.P. King
Date collected: 09/10/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-22.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/13/2007	KEN07-13	648	646	0	99.69	0.31
2	SAT2/KEN/10/2007	KEN07-10	648	645	0	99.54	0.46
3	SAT2/KEN/14/2007	KEN07-14	648	645	0	99.54	0.46
4	SAT2/KEN/5/2007	KEN07-05	648	645	0	99.54	0.46
5	SAT2/KEN/11/2007	KEN07-11	648	644	0	99.38	0.62
6	SAT2/KEN/2/2007	KEN07-02	648	643	0	99.23	0.77
7	SAT2/KEN/2/2008	KEN08-02	648	642	0	99.07	0.93
8	SAT2/KEN/7/2007	KEN07-07	648	642	0	99.07	0.93
9	SAT2/KEN/16/2007	KEN07-16	648	641	0	98.92	1.08
10	SAT2/KEN/8/2007	KEN07-08	648	641	0	98.92	1.08

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	567	0	87.5	12.5
2	SAT2/K183/74 (Kenya)	KEN74183	648	565	0	87.19	12.81
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	521	0	80.4	19.6
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	514	0	79.32	20.68
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	488	0	75.31	24.69
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	476	0	73.46	26.54
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	473	1	73.11	26.89
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	464	0	71.6	28.4
10	SAT2/KEN/3/57	KEN57-03	648	459	0	70.83	29.17

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/23/2007	Reported by: N.J. Knowles
Sender Ref: K96/07	Checked by: D.P. King
Date collected: 13/11/2007	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN07-23.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
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: 75 days
No. of ambiguities: 0	Sequencing time: 50 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/KEN/16/2007	KEN07-16	648	642	0	99.07	0.93
2	SAT2/KEN/7/2007	KEN07-07	648	641	0	98.92	1.08
3	SAT2/KEN/2/2007	KEN07-02	648	640	0	98.77	1.23
4	SAT2/KEN/8/2007	KEN07-08	648	640	0	98.77	1.23
5	SAT2/KEN/10/2007	KEN07-10	648	638	0	98.46	1.54
6	SAT2/KEN/14/2007	KEN07-14	648	638	0	98.46	1.54
7	SAT2/KEN/5/2007	KEN07-05	648	638	0	98.46	1.54
8	SAT2/KEN/9/2007	KEN07-09	648	638	0	98.46	1.54
9	SAT2/KEN/11/2007	KEN07-11	648	637	0	98.3	1.7
10	SAT2/KEN/22/2007	KEN07-22	648	637	0	98.3	1.7

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	564	0	87.04	12.96
2	SAT2/K183/74 (Kenya)	KEN74183	648	563	0	86.88	13.12
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	518	0	79.94	20.06
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.4	21.6
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	487	0	75.15	24.85
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	475	0	73.3	26.7
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	470	1	72.64	27.36
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	468	0	72.22	27.78
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	458	0	70.68	29.32

nt, nucleotides

\*, not a WRLFMD reference number

Serotype: SAT2	Report date: 05/08/2008
WRL Ref No: KEN/2/2008	Reported by: N.J. Knowles
Sender Ref: K2/08	Checked by: D.P. King
Date collected: 08/01/2008	
Date received by WRLFMD: 22/05/2008	Topotype: none defined
Date received for sequencing: 16/06/2008	Genotype/strain: none designated
Species: Cattle	Sequence filename: KEN08-02.SEQ
Material used: BTy1	Date sequence last updated: 03/08/2008
Region sequenced: VP1	Total no. of comparisons: 435
RT-PCR primers: SAT2-1C445F/SAT-2B208R;	Min. no. of nt for comparison: 300
SAT2-P1-1223F/SAT-2B208R	Total turn-around time: 75 days
No. of Nt determined: 648	Sequencing time: 50 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/KEN/10/2007	KEN07-10	648	645	0	99.54	0.46
2	SAT2/KEN/5/2007	KEN07-05	648	645	0	99.54	0.46
3	SAT2/KEN/11/2007	KEN07-11	648	644	0	99.38	0.62
4	SAT2/KEN/19/2007	KEN07-19	648	644	0	99.38	0.62
5	SAT2/KEN/14/2007	KEN07-14	648	643	0	99.23	0.77
6	SAT2/KEN/22/2007	KEN07-22	648	642	0	99.07	0.93
7	SAT2/KEN/2/2007	KEN07-02	648	641	0	98.92	1.08
8	SAT2/KEN/13/2007	KEN07-13	648	640	0	98.77	1.23
9	SAT2/KEN/7/2007	KEN07-07	648	640	0	98.77	1.23
10	SAT2/KEN/16/2007	KEN07-16	648	639	0	98.61	1.39

#### Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	SAT2/K52/84 (Kenya)	KEN84K52	648	567	0	87.5	12.5
2	SAT2/K183/74 (Kenya)	KEN74183	648	565	0	87.19	12.81
3	SAT2/RHO/1/48 [AJ251475]	ZAM48A01	648	519	0	80.09	19.91
4	SAT2/SA/106/59 (AY593848)	RSA59--A	648	508	0	78.4	21.6
5	SAT2/ZIM/7/83 [AF136607]	ZIM83A07	648	486	0	75	25
6	SAT2/GHA/2/90 (AF479415)	GHA90A02	648	477	0	73.61	26.39
7	SAT2/SAU/6/2000 [AF367135]	SAU00A06	647	471	1	72.8	27.2
8	SAT2/GAM/8/79 [AF479410]	GAM79-08	648	467	0	72.07	27.93
9	SAT2/ANG/4/74 [AF479417]	ANG74-04	648	463	0	71.45	28.55
10	SAT2/KEN/3/57	KEN57-03	648	458	0	70.68	29.32

nt, nucleotides

\*, not a WRLFMD reference number

# Report on FMDV SAT 2 from Kenya in 2007-2008

Software: MEGA 4.0  
 No. of Taxa : 262  
 Data File : n:\levd\meg\db\fmdv\sat2\KEN2008a.meg  
 Data Title : SAT 2  
 Data Type : Nucleotide (Coding)  
 Analysis : Phylogeny reconstruction  
 Tree Inference : =====  
 ->Method : Neighbor-Joining  
 ->Phylogeny Test and options : Bootstrap (1000 replicates; seed=31764)  
 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 : 651  
 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, 5 August 2008

