

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

## Genotyping Report

Report Date for this Batch: 26 May 2014

FMDV type SAT 2

Country: Egypt

Period: 2014

No. of samples: 3

BATCH: WRLFMD/2014/00017



The contents of this report are copyright and should not be reproduced without permission

© The Pirbright Institute

# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: SAT2	Report date: 26/05/2014
WRLFMD Ref No: EGY/11/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 14	
Location: Abo Hussin, El Ganain, Suez, Egypt	Topotype: VII
Date collected: 03/02/2014	Genotype/strain: Alx-12
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-11.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 22/05/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 07/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 646
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 7 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/EGY/20/2014	EGY14-20	648	644	0	99.38	0.62	VII	Alx-12
2	SAT2/EGY/22/2014	EGY14-22	648	644	0	99.38	0.62	VII	Alx-12
3	SAT2/SUD/4/2010 (KF112968)	SUD10-04	648	621	0	95.83	4.17	VII	Alx-12
4	SAT2/EGY/2/2012 (JX570617)	EGY12-02	648	604	0	93.21	6.79	VII	Alx-12
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	591	1	91.34	8.66	VII	unnamed
6	SAT2/EGY/11/2012 (JX570624)	EGY12-11	648	575	0	88.73	11.27	VII	Ghb-12
7	SAT2/EGY/9/2012 (JX570622)	EGY12-09	648	575	0	88.73	11.27	VII	Ghb-12
8	SAT2/EGY/10/2012 (JX570623)	EGY12-10	648	574	0	88.58	11.42	VII	Ghb-12
9	SAT2/EGY/14/2012 (JX570626)	EGY12-14	648	574	0	88.58	11.42	VII	Ghb-12
10	SAT2/EGY/15/2012 (JX570627)	EGY12-15	648	574	0	88.58	11.42	VII	Ghb-12

## Most Closely Related Reference Viruses

(see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm))

Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	591	1	91.34	8.66	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	568	0	87.65	12.35	VII	unnamed
3	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	489	0	75.46	24.54	IX	unnamed
4	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	484	0	74.69	25.31	IX	unnamed
5	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	477	0	74.30	25.70	VIII	unnamed
6	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	478	1	73.88	26.12	X	unnamed
7	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	476	0	73.46	26.54	XIV	unnamed
8	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	475	0	73.30	26.70	X	unnamed
9	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	474	0	73.15	26.85	XII	unnamed
10	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	470	0	72.53	27.47	XIII	unnamed

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.2

© The Pirbright Institute (not to be reproduced without permission)

# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: SAT2	Report date: 26/05/2014
WRLFMD Ref No: EGY/20/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 24	
Location: Bandar Qena, Qena, Egypt	Topotype: VII
Date collected: 04/03/2014	Genotype/strain: Alx-12
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-20.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 22/05/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 08/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 646
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 7 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	SAT2/EGY/22/2014	EGY14-22	648	648	0	100.00	0.00	VII	Alx-12
2	SAT2/EGY/11/2014	EGY14-11	648	644	0	99.38	0.62	VII	Alx-12
3	SAT2/SUD/4/2010 (KF112968)	SUD10-04	648	623	0	96.14	3.86	VII	Alx-12
4	SAT2/EGY/2/2012 (JX570617)	EGY12-02	648	606	0	93.52	6.48	VII	Alx-12
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	592	1	91.50	8.50	VII	unnamed
6	SAT2/EGY/11/2012 (JX570624)	EGY12-11	648	576	0	88.89	11.11	VII	Ghb-12
7	SAT2/EGY/9/2012 (JX570622)	EGY12-09	648	576	0	88.89	11.11	VII	Ghb-12
8	SAT2/EGY/10/2012 (JX570623)	EGY12-10	648	575	0	88.73	11.27	VII	Ghb-12
9	SAT2/EGY/14/2012 (JX570626)	EGY12-14	648	575	0	88.73	11.27	VII	Ghb-12
10	SAT2/EGY/15/2012 (JX570627)	EGY12-15	648	575	0	88.73	11.27	VII	Ghb-12
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	592	1	91.50	8.50	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	569	0	87.81	12.19	VII	unnamed
3	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	491	0	75.77	24.23	IX	unnamed
4	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	484	0	74.69	25.31	IX	unnamed
5	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	477	0	74.30	25.70	VIII	unnamed
6	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	479	1	74.03	25.97	X	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	476	0	73.46	26.54	X	unnamed
8	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	475	0	73.30	26.70	XII	unnamed
9	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	473	0	72.99	27.01	XIV	unnamed
10	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	471	0	72.69	27.31	XIII	unnamed

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.2

© The Pirbright Institute (not to be reproduced without permission)

# FAO World Reference Laboratory for FMD Genotyping Report

IAH-P-EP-MEG-FOR-005-3

Page 1 of 1

Serotype: SAT2	Report date: 26/05/2014
WRLFMD Ref No: EGY/22/2014	Reported by: N.J. Knowles
Batch No: WRLFMD/2014/00017	Checked by: K. Bachanek-Bankowska
Sender Ref: 22	
Location: Bandar Qena, Qena, Egypt	Topotype: VII
Date collected: 17/03/2014	Genotype/strain: Alx-12
Date received by WRLFMD: 23/04/2014	Sequence filename: EGY14-22.SEQ
Date received for sequencing: 19/05/2014	Date sequence last updated: 22/05/2014
Species: Cattle	No. of Nt determined: 648
Material used: BTy1 09/05/2014	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 648
RT-PCR primers: SAT2-1C445F/SAT-2B208R	Total no. of comparisons: 646
SAT2-P1-1223F/SAT-2B208R	Min. no. of nt for comparison: 600
	Total turn-around time: 33 days
	Sequencing time: 7 days
Comments:	

<b>Most Closely Related Viruses</b>									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	SAT2/EGY/20/2014	EGY14-20	648	648	0	100.00	0.00	VII	Alx-12
2	SAT2/EGY/11/2014	EGY14-11	648	644	0	99.38	0.62	VII	Alx-12
3	SAT2/SUD/4/2010 (KF112968)	SUD10-04	648	623	0	96.14	3.86	VII	Alx-12
4	SAT2/EGY/2/2012 (JX570617)	EGY12-02	648	606	0	93.52	6.48	VII	Alx-12
5	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	592	1	91.50	8.50	VII	unnamed
6	SAT2/EGY/11/2012 (JX570624)	EGY12-11	648	576	0	88.89	11.11	VII	Ghb-12
7	SAT2/EGY/9/2012 (JX570622)	EGY12-09	648	576	0	88.89	11.11	VII	Ghb-12
8	SAT2/EGY/10/2012 (JX570623)	EGY12-10	648	575	0	88.73	11.27	VII	Ghb-12
9	SAT2/EGY/14/2012 (JX570626)	EGY12-14	648	575	0	88.73	11.27	VII	Ghb-12
10	SAT2/EGY/15/2012 (JX570627)	EGY12-15	648	575	0	88.73	11.27	VII	Ghb-12
<b>Most Closely Related Reference Viruses</b>									
(see <a href="http://www.wrlfmd.org/fmd_genotyping/prototypes.htm">http://www.wrlfmd.org/fmd_genotyping/prototypes.htm</a> )									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	SAT2/SAU/6/2000 (AF367135)	SAU00A06	647	592	1	91.50	8.50	VII	unnamed
2	SAT2/CAR/8/2005 (JX570616)	CAR05-08	648	569	0	87.81	12.19	VII	unnamed
3	SAT2/KEN/3/57 (AJ251473)	KEN57G03	648	491	0	75.77	24.23	IX	unnamed
4	SAT2/KEN/2/84 (AY343941)	KEN84-AC	648	484	0	74.69	25.31	IX	unnamed
5	SAT2/ZAI/1/74 (DQ009737)	ZAI74-AA	642	477	0	74.30	25.70	VIII	unnamed
6	SAT2/ZAI/1/82 (AF367100)	ZAI82-01	647	479	1	74.03	25.97	X	unnamed
7	SAT2/UGA/19/98 (AY343969)	UGA98-AA	648	476	0	73.46	26.54	X	unnamed
8	SAT2/UGA/51/75 (AY343963)	UGA75-AA	648	475	0	73.30	26.70	XII	unnamed
9	SAT2/ETH/2/91 (AY343938)	ETH91-AB	648	473	0	72.99	27.01	XIV	unnamed
10	SAT2/SUD/6/77 (AY343939)	SUD77-AA	648	471	0	72.69	27.31	XIII	unnamed

nt, nucleotides

\*, not a WRLFMD reference number

Assembled with Report Generator v4.2

© The Pirbright Institute (not to be reproduced without permission)

# Report on FMDV SAT 2 in Egypt in 2014

Batch: WRLFMD/2014/00017

◆ indicates viruses in this batch

Software: MEGA 6.06

Analysis

Analysis ----- Phylogeny Reconstruction

Scope ----- All Selected Taxa

Statistical Method ----- Neighbor-joining

Phylogeny Test

Test of Phylogeny ----- Bootstrap method

No. of Bootstrap Replications ----- 1000

Substitution Model

Substitutions Type ----- Nucleotide

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

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

Rates and Patterns

Rates among Sites ----- Uniform rates

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

Data Subset to Use

Gaps/Missing Data Treatment ----- 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

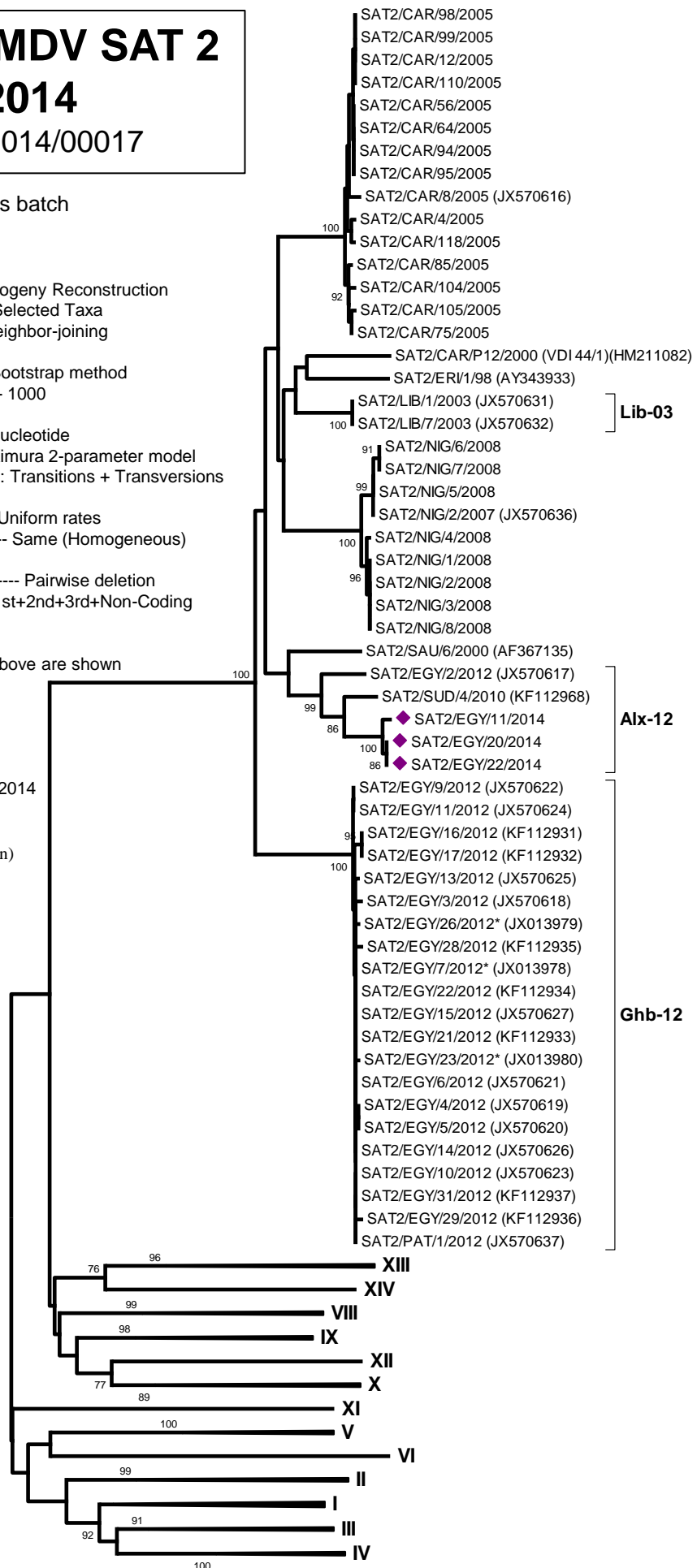
\*, not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth &

K. Bachanek-Bankowska, 26 May 2014

© The Pirbright Institute

(not to be reproduced without permission)



0.05