

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

Genotyping Report

FMDV serotype: A
Country: Egypt
Year: 2016
Batch: WRLFMD/2017/00014
No. of sequences: 1
Report date: 11th August 2017
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska



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

email: reporting@pirbright.ac.uk

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Virus sample name:	EGY/19/2016
Sender reference:	1 (RV/19)
Location of origin:	Faculty of Agriculture, Cairo University, Giza
Country of origin:	Egypt
Date of collection:	07/11/2016
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 07/07/2017 & BTY2
Harvest date of material:	15/07/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	07/08/2017
Created:	11/08/2017
Last updated:	11/08/2017
VIBASys IDs: sample 34153, genome 34154, sequence viba_34155, sequencing info 34156	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30350	Ismailia 2/Egy/2016	cattle	99.2	0	A	AFRICA	G-IV	
viba_30354	Ismailia 3/Egy/2016	cattle	99.2	0	A	AFRICA	G-IV	
viba_30362	Giza 1/Egy/2016	cattle	99.2	0	A	AFRICA	G-IV	
viba_29558	EGY/8/2015	cattle	99.2	0	A	AFRICA	G-IV	
viba_29562	EGY/3/2016	cattle	99.2	0	A	AFRICA	G-IV	
viba_30358	Ismailia 4/Egy/2016	cattle	99.2	0	A	AFRICA	G-IV	
viba_30346	Ismailia 1/Egy/2016	cattle	99.1	0	A	AFRICA	G-IV	
viba_25918	ETH/19/2015	bovine	97.5	0	A	AFRICA	G-IV	
viba_17207	SUD/12/2011	cattle	88.6	0	A	AFRICA	G-IV	
viba_17199	SUD/1/2011	cattle	88.5	0	A	AFRICA	G-IV	

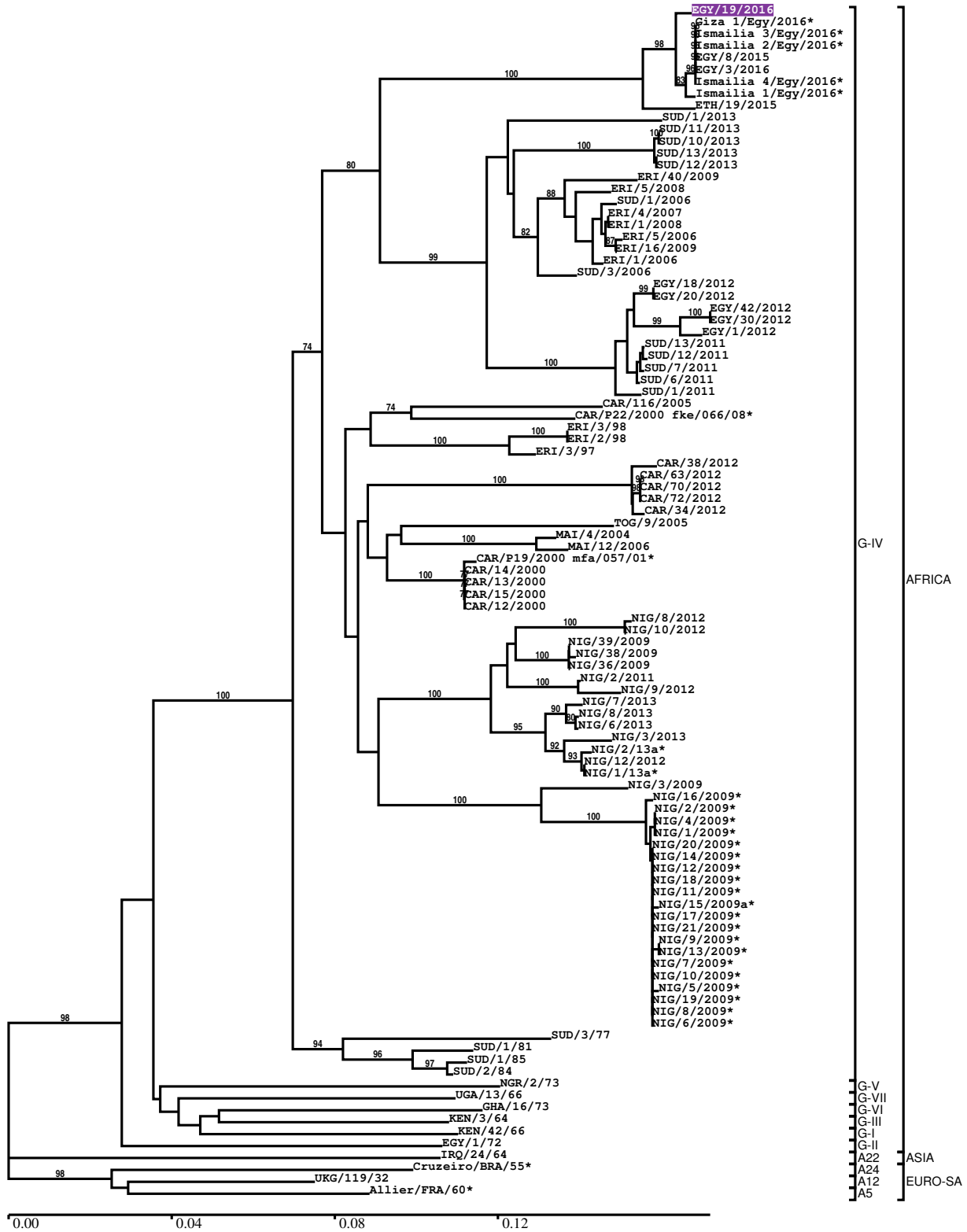
Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_178	SUD/3/77		84.9	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.0	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	82.3	0	A	AFRICA	G-VI	
viba_688	EGY/1/72	bovine	82.1	0	A	AFRICA	G-II	
viba_785	KEN/3/64		81.3	0	A	AFRICA	G-III	
viba_173	UGA/13/66	bovine	81.2	0	A	AFRICA	G-VII	
viba_699	UKG/119/32		80.7	0	A	EURO-SA	A12	
viba_217	Cruzeiro/BRA/55	bovine	79.7	0	A	EURO-SA	A24	
viba_435	Allier/FRA/60		79.6	0	A	EURO-SA	A5	

Report on FMDV A in Egypt in 2016

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*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2017/00014-Egypt-A (1 sequences)
Sequence database set:	allseqs_A (1675 sequences)
Prototype sequence set:	!prototypes_A (34 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	633
Phylogeny reconstruction method:	fdnadist, fneighbor
Number of bootstrap samples:	1000
Random seed for bootstrapping:	1
Displaying bootstrap values above:	70.0%
Number of sequences in tree capped at:	100
Number of prototype sequences in tree:	10
VIBASys version:	master-1.1.0-17-gf69a4d1

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/A

label	accession	host(s)	lab	country	taxonomic information
EGY/19/2016	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
Giza 1/Egy/2016*	KX447000	cattle	Suez Canal Univ	Egypt	AFRICA/G-IV
Ismailia 3/Egy/2016*	KX446998	cattle	Suez Canal Univ	Egypt	AFRICA/G-IV
Ismailia 2/Egy/2016*	KX446997	cattle	Suez Canal Univ	Egypt	AFRICA/G-IV
EGY/8/2015	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/3/2016	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
Ismailia 4/Egy/2016*	KX446999	cattle	Suez Canal Univ	Egypt	AFRICA/G-IV
Ismailia 1/Egy/2016*	KX446996	cattle	Suez Canal Univ	Egypt	AFRICA/G-IV
ETH/19/2015	n/a	bovine	WRLFMD	Ethiopia	AFRICA/G-IV
SUD/1/2013	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/11/2013	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/10/2013	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/13/2013	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/12/2013	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
ERI/40/2009	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/5/2008	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
SUD/1/2006	GU566069	cattle	WRLFMD	Sudan	AFRICA/G-IV
ERI/4/2007	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/1/2008	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/5/2006	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/16/2009	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/1/2006	KX258046	cattle	WRLFMD	Eritrea	AFRICA/G-IV
SUD/3/2006	GU566070	cattle	WRLFMD	Sudan	AFRICA/G-IV
EGY/18/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/20/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/42/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/30/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/1/2012	n/a	n/a	WRLFMD	Egypt	AFRICA/G-IV
SUD/13/2011	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/12/2011	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/7/2011	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/6/2011	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV

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label	accession	host(s)	lab	country	taxonomic information
SUD/1/2011	n/a	cattle	WRLFMD	Sudan	AFRICA/G-IV
CAR/116/2005	KX258135	cattle	WRLFMD	Cameroon	AFRICA/G-IV
CAR/P22/2000 fke/066/08*	n/a	n/a	WRLFMD	Cameroon	AFRICA/G-IV
ERI/3/98	KX258045	n/a	WRLFMD	Eritrea	AFRICA/G-IV
ERI/2/98	KX258044	n/a	WRLFMD	Eritrea	AFRICA/G-IV
ERI/3/97	KX258043	n/a	WRLFMD	Eritrea	AFRICA/G-IV
CAR/38/2012	KX266276	bovine	WRLFMD	Cameroon	AFRICA/G-IV
CAR/63/2012	KX266280	bovine	WRLFMD	Cameroon	AFRICA/G-IV
CAR/70/2012	KX266281	bovine	WRLFMD	Cameroon	AFRICA/G-IV
CAR/72/2012	KX266282	bovine	WRLFMD	Cameroon	AFRICA/G-IV
CAR/34/2012	KX266275	bovine	WRLFMD	Cameroon	AFRICA/G-IV
TOG/9/2005	KX258062	cattle	n/a	Togo	AFRICA/G-IV
MAI/4/2004	KX258047	cattle	n/a	Mali	AFRICA/G-IV
MAI/12/2006	KX258048	n/a	WRLFMD	Mali	AFRICA/G-IV
CAR/P19/2000 mfa/057/01*	n/a	n/a	WRLFMD	Cameroon	AFRICA/G-IV
CAR/14/2000	KX258132	n/a	WRLFMD	Cameroon	AFRICA/G-IV
CAR/13/2000	KX258131	n/a	WRLFMD	Cameroon	AFRICA/G-IV
CAR/15/2000	EF208755	n/a	WRLFMD	Cameroon	AFRICA/G-IV
CAR/12/2000	KX258130	n/a	WRLFMD	Cameroon	AFRICA/G-IV
NIG/8/2012	KX258054	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/10/2012	KX258056	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/39/2009	KX258052	cattle	WRLFMD	Nigeria	AFRICA/G-IV
NIG/38/2009	KX258051	cattle	WRLFMD	Nigeria	AFRICA/G-IV
NIG/36/2009	KX258050	cattle	WRLFMD	Nigeria	AFRICA/G-IV
NIG/2/2011	KX258053	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/9/2012	KX258055	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/7/2013	KX258060	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/8/2013	KX258061	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/6/2013	KX258059	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/3/2013	KX258058	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/2/13a*	KY584071	bovine	CODA-CERVA	Nigeria	AFRICA/G-IV
NIG/12/2012	KX258057	bovine	WRLFMD	Nigeria	AFRICA/G-IV
NIG/1/13a*	KY584070	bovine	CODA-CERVA	Nigeria	AFRICA/G-IV
NIG/3/2009	KX258049	cattle	WRLFMD	Nigeria	AFRICA/G-IV
NIG/16/2009*	JN680724	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/2/2009*	JN680710	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/4/2009*	JN680712	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/1/2009*	JN680709	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/20/2009*	JN680728	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/14/2009*	JN680722	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/12/2009*	JN680720	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/18/2009*	JN680726	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/11/2009*	JN680719	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/15/2009a*	JN680723	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/17/2009*	JN680725	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/21/2009*	JN680729	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/9/2009*	JN680717	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/13/2009*	JN680721	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/7/2009*	JN680715	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/10/2009*	JN680718	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/5/2009*	JN680713	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/19/2009*	JN680727	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/8/2009*	JN680716	cattle	PIADC	Nigeria	AFRICA/G-IV
NIG/6/2009*	JN680714	cattle	PIADC	Nigeria	AFRICA/G-IV
SUD/3/77	GU566064	n/a	WRLFMD	Sudan	AFRICA/G-IV
SUD/1/81	GU566065	n/a	WRLFMD	Sudan	AFRICA/G-IV
SUD/1/85	GU566068	n/a	WRLFMD	Sudan	AFRICA/G-IV
SUD/2/84	GU566067	n/a	WRLFMD	Sudan	AFRICA/G-IV
NGR/2/73	KF561704	bovine	WRLFMD	Niger	AFRICA/G-V
UGA/13/66	KF561705	bovine	WRLFMD	Uganda	AFRICA/G-VII
GHA/16/73	KF561698	bovine	WRLFMD	Ghana	AFRICA/G-VI
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III
KEN/42/66	KF561699	n/a	WRLFMD	Kenya	AFRICA/G-I
EGY/1/72	EF208756	bovine	WRLFMD	Egypt	AFRICA/G-II
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24

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label	accession	host(s)	lab	country	taxonomic information
UKG/119/32	M10975	n/a	PIADC	United Kingdom	EURO-SA/A12
Allier/FRA/60*	AY593780	n/a	PIADC	France	EURO-SA/A5

*, not a WRLFMD Reference Number

n/a, not available