

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

Genotyping Report

FMDV serotype: O
Country: South Sudan
Year: 2017
Batch: WRLFMD/2018/00024
No. of sequences: 1
Report date: 18th December 2018
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth

Supplementary report on a virus recovered
by transfection of LFBK cells with RNA
extracted from one of the samples submitted.



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

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Virus sample name:	SSD/6/2017
Sender reference:	SS6/2018
Location of origin:	Jonglei
Country of origin:	South Sudan
Date of collection:	18/05/2017
Host species:	bovine
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	LFBK1
Harvest date of material:	15/12/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	17/12/2018
Created:	18/12/2018
Last updated:	18/12/2018
VIBASys IDs: sample 37721, genome 37722, sequence viba_37723, sequencing info 37724	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33523	ETH/4/2017	cattle	98.9	0	O	EA-3		
viba_33527	ETH/5/2017	cattle	98.9	0	O	EA-3		
viba_33519	ETH/3/2017	cattle	98.9	0	O	EA-3		
viba_37029	SUD/1/2016	cattle	98.7	0	O	EA-3		
viba_33515	ETH/2/2017	cattle	98.6	0	O	EA-3		
viba_34239	EGY/33/2017	cattle	98.6	0	O	EA-3		
viba_35505	Giza 1/Egy/2017		98.4	0	O	EA-3		
viba_34211	EGY/25/2017	cattle	98.4	0	O	EA-3		
viba_35497	Alexandria 1/Egy/2016		98.4	0	O	EA-3		
viba_34195	EGY/17/2017	cattle	98.4	0	O	EA-3		

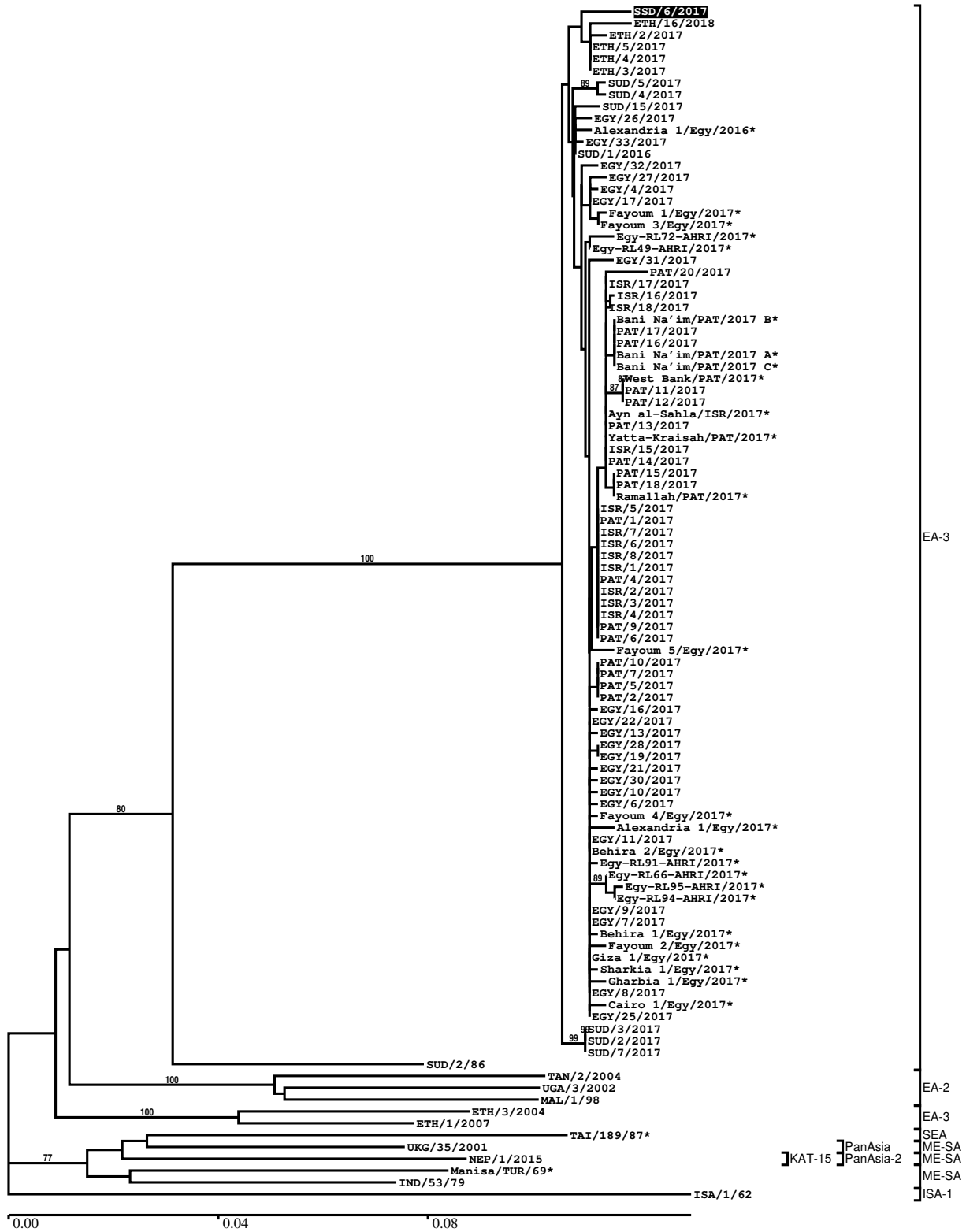
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_116	SUD/2/86	bovine	87.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	84.2	0	O	EA-3		
viba_408	ETH/3/2004	cattle	84.1	0	O	EA-3		
viba_617	IND/53/79	bovine	83.6	0	O	ME-SA		
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	83.3	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	83.3	1	O	ME-SA	PanAsia-2	KAT-15
viba_85	UGA/3/2002		83.2	0	O	EA-2		
viba_263	TAN/2/2004	bovine	83.1	0	O	EA-2		
viba_221	MAL/1/98		83.1	0	O	EA-2		

Report on FMDV O in South Sudan in 2017

Batch: WRLFMD/2018/00024



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2018/00024-South Sudan-O (1 sequences)
Sequence database set:	allseqs_O (3919 sequences)
Prototype sequence set:	!prototypes_O (49 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	636
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:	reflabs-1.1.2

Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
SSD/6/2017	n/a	bovine	WRLFMD	South Sudan	EA-3
ETH/16/2018	n/a	cattle	WRLFMD	Ethiopia	EA-3
ETH/2/2017	n/a	cattle	WRLFMD	Ethiopia	EA-3
ETH/5/2017	n/a	cattle	WRLFMD	Ethiopia	EA-3
ETH/4/2017	n/a	cattle	WRLFMD	Ethiopia	EA-3
ETH/3/2017	n/a	cattle	WRLFMD	Ethiopia	EA-3
SUD/5/2017	n/a	cattle	WRLFMD	Sudan	EA-3
SUD/4/2017	n/a	cattle	WRLFMD	Sudan	EA-3
SUD/15/2017	n/a	cattle	WRLFMD	Sudan	EA-3
EGY/26/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Alexandria 1/Egy/2016*	MF322680	n/a	MEVAC	Egypt	EA-3
EGY/33/2017	n/a	cattle	WRLFMD	Egypt	EA-3
SUD/1/2016	n/a	cattle	WRLFMD	Sudan	EA-3
EGY/32/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/27/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/4/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
EGY/17/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Fayoum 1/Egy/2017*	MF322688	n/a	MEVAC	Egypt	EA-3
Fayoum 3/Egy/2017*	MF322690	n/a	MEVAC	Egypt	EA-3
Egy-RL72-AHRI/2017*	MH729316	cattle	AHRI	Egypt	EA-3
Egy-RL49-AHRI/2017*	MH729321	water buffalo	AHRI	Egypt	EA-3
EGY/31/2017	n/a	cattle	WRLFMD	Egypt	EA-3
PAT/20/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
ISR/17/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/16/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/18/2017	n/a	cattle	WRLFMD	Israel	EA-3
Bani Na'im/PAT/2017 B*	n/a	sheep	KVI	Palestinian AT	EA-3
PAT/17/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
PAT/16/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
Bani Na'im/PAT/2017 A*	n/a	sheep	KVI	Palestinian AT	EA-3
Bani Na'im/PAT/2017 C*	n/a	sheep	KVI	Palestinian AT	EA-3
West Bank/PAT/2017*	n/a	sheep	KVI	Palestinian AT	EA-3
PAT/11/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
PAT/12/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
Ayn al-Sahla/ISR/2017*	n/a	cattle	KVI	Israel	EA-3
PAT/13/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3

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label	accession	host(s)	lab	country	taxonomic information
Yatta-Kraisah/PAT/2017*	n/a	cattle	KVI	Palestinian AT	EA-3
ISR/15/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/14/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/15/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
PAT/18/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
Ramallah/PAT/2017*	n/a	sheep	KVI	Palestinian AT	EA-3
ISR/5/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/1/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/7/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/6/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/8/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/1/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/4/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/2/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/3/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/4/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/9/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/6/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
Fayoum 5/Egy/2017*	MF322692	n/a	MEVAC	Egypt	EA-3
PAT/10/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/7/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/5/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/2/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
EGY/16/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/22/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
EGY/13/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/28/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/19/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/21/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/30/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/10/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
EGY/6/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Fayoum 4/Egy/2017*	MF322691	n/a	MEVAC	Egypt	EA-3
Alexandria 1/Egy/2017*	MF322681	n/a	MEVAC	Egypt	EA-3
EGY/11/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
Behira 2/Egy/2017*	MF322687	n/a	MEVAC	Egypt	EA-3
Egy-RL91-AHRI/2017*	MH729320	cattle	AHRI	Egypt	EA-3
Egy-RL66-AHRI/2017*	MH729317	cattle	AHRI	Egypt	EA-3
Egy-RL95-AHRI/2017*	MH729319	cattle	AHRI	Egypt	EA-3
Egy-RL94-AHRI/2017*	MH729318	cattle	AHRI	Egypt	EA-3
EGY/9/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/7/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Behira 1/Egy/2017*	MF322686	n/a	MEVAC	Egypt	EA-3
Fayoum 2/Egy/2017*	MF322689	n/a	MEVAC	Egypt	EA-3
Giza 1/Egy/2017*	MF322682	n/a	MEVAC	Egypt	EA-3
Sharkia 1/Egy/2017*	MF322684	n/a	MEVAC	Egypt	EA-3
Gharbia 1/Egy/2017*	MF322685	n/a	MEVAC	Egypt	EA-3
EGY/8/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Cairo 1/Egy/2017*	MF322683	n/a	MEVAC	Egypt	EA-3
EGY/25/2017	n/a	cattle	WRLFMD	Egypt	EA-3
SUD/3/2017	n/a	cattle	WRLFMD	Sudan	EA-3
SUD/2/2017	n/a	cattle	WRLFMD	Sudan	EA-3
SUD/7/2017	n/a	cattle	WRLFMD	Sudan	EA-3
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
TAN/2/2004	KF561679	bovine	WRLFMD	Tanzania	EA-2
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
MAL/1/98	DQ165074	n/a	WRLFMD	Malawi	EA-2
ETH/3/2004	FJ798109	cattle	WRLFMD	Ethiopia	EA-3
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
NEP/1/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number
n/a, not available