

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

Genotyping Report

FMDV serotype: O
Country: Libya
Year: 2023
Batch: WRLMEG/2023/00016
No. of sequences: 1
Report date: 4th April 2023
Report generated by: Nick Knowles
Report checked by: Don King

This report has been prepared on behalf of the Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini« (IZSLER), Brescia, Italy, and covers a VP1 sequence submitted to the WRLFMD on 04/04/2023.



Copyright © 2023 The Pirbright Institute, Ash Road, Pirbright, Woking GU24 0NF, United Kingdom.

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

email: reporting@pirbright.ac.uk

The contents of this report should not be reproduced without permission.

Virus sample name:	LIB/1/2023_(IZSLER_95887/13)
Sender reference:	O/LIB/1/2023 (IZSLER 95887/13)
Location of origin:	Al-Marj
Country of origin:	Libya
Date of collection:	03/2023
Host species:	
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	04/04/2023
Last updated:	04/04/2023
VIBASys IDs: sample 52791, genome 52792, sequence viba_52793, sequencing info 52794	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_34187	EGY/13/2017	cattle	94.8	0	O	EA-3		
viba_34203	EGY/21/2017	cattle	94.8	0	O	EA-3		
viba_37049	SUD/7/2017	cattle	94.6	0	O	EA-3		
viba_37033	SUD/2/2017	cattle	94.6	0	O	EA-3		
viba_35505	Giza 1/Egy/2017		94.6	0	O	EA-3		
viba_39472	Egy/Port Said/2016	cattle	94.6	0	O	EA-3		
viba_37029	SUD/1/2016	cattle	94.6	0	O	EA-3		
viba_34207	EGY/22/2017	water buffalo	94.6	0	O	EA-3		
viba_34211	EGY/25/2017	cattle	94.6	0	O	EA-3		
viba_35525	Behira 2/Egy/2017		94.6	0	O	EA-3		

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

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	84.4	0	O	EA-3		
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_617	IND/53/79	bovine	83.8	0	O	ME-SA		
viba_27877	SRL/2/97	bovine	83.4	0	O	ME-SA	Srl-97	
viba_9021	LAO/2/2006	cattle	83.1	0	O	ME-SA	PanAsia	
viba_85	UGA/3/2002		83.1	0	O	EA-2		
viba_285	UKG/35/2001	porcine	82.8	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		82.8	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	82.6	0	O	ME-SA	PanAsia-2	FAR-09

Report on FMDV O in Libya in 2023

Batch: WRLMEG/2023/00016



* , not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2023/00016-Libya-O (1 sequences)
Sequence database set:	allseqs_O (5862 sequences)
Prototype sequence set:	!prototypes_O (58 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
LIB/1/2023_(IZSLER_95887/13)*	n/a	n/a	IZSLER	Libya	EA-3
SUD/3/2017	MK422565	cattle	WRLFMD	Sudan	EA-3
SUD/2/2017	MK422564	cattle	WRLFMD	Sudan	EA-3
SUD/7/2017	MK422568	cattle	WRLFMD	Sudan	EA-3
ETH/72/2018	MN987477	cattle	WRLFMD	Ethiopia	EA-3
ETH/3/2017	MN987453	cattle	WRLFMD	Ethiopia	EA-3
ETH/5/2017	MN987455	cattle	WRLFMD	Ethiopia	EA-3
SUD/4/2017	MK422566	cattle	WRLFMD	Sudan	EA-3
SUD/5/2017	MK422567	cattle	WRLFMD	Sudan	EA-3
SUD/15/2017	MK422569	cattle	WRLFMD	Sudan	EA-3
Alexandria 1/Egy/2016*	MF322680	n/a	MEVAC	Egypt	EA-3
EGY/26/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/33/2017	n/a	cattle	WRLFMD	Egypt	EA-3
SUD/1/2016	MK422563	cattle	WRLFMD	Sudan	EA-3
ERI/7/2017	n/a	porcine	WRLFMD	Eritrea	EA-3
ERI/3/2017	n/a	bovine	WRLFMD	Eritrea	EA-3
ERI/4/2017	n/a	bovine	WRLFMD	Eritrea	EA-3
ERI/1/2017	n/a	bovine	WRLFMD	Eritrea	EA-3
ERI/2/2017	n/a	bovine	WRLFMD	Eritrea	EA-3
ERI/8/2017	n/a	porcine	WRLFMD	Eritrea	EA-3
EGY/32/2017	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 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
Alexandria 1/Egy/2017*	MF322681	n/a	MEVAC	Egypt	EA-3
ISR/16/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/18/2017	n/a	sheep	WRLFMD	Palestinian	EA-3
Bani Na'im/PAT/2017 A*	n/a	sheep	KVI	Palestinian	EA-3
PAT/17/2017	n/a	sheep	WRLFMD	Palestinian	EA-3
Bani Na'im/PAT/2017 C*	n/a	sheep	KVI	Palestinian	EA-3

continued on next page

label	accession	host(s)	lab	country	taxonomic information
PAT/16/2017	n/a	sheep	WRLFMD	Palestinian AT	EA-3
PAT/14/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/15/2017	n/a	cattle	WRLFMD	Israel	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
Yatta-Kraisah/PAT/2017*	n/a	cattle	KVI	Palestinian AT	EA-3
ISR/17/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/2/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/4/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/5/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/6/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/1/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/8/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/6/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/11/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/7/2017	n/a	cattle	WRLFMD	Israel	EA-3
PAT/9/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
ISR/4/2017	n/a	cattle	WRLFMD	Israel	EA-3
ISR/3/2017	n/a	cattle	WRLFMD	Israel	EA-3
EGY/31/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Giza 1/Egy/2017*	MF322682	n/a	MEVAC	Egypt	EA-3
EGY/10/2021	n/a	water buffalo	WRLFMD	Egypt	EA-3
EGY/9/2021	n/a	water buffalo	WRLFMD	Egypt	EA-3
EGY/13/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/9/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/25/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/16/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/6/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/19/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/28/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Egy/Port Said/2016*	MG552846	cattle	AHRI	Egypt	EA-3
EGY/21/2017	n/a	cattle	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/8/2021	n/a	cattle	WRLFMD	Egypt	EA-3
Egy-RL66-AHRI/2017*	MH729317	cattle	AHRI	Egypt	EA-3
EGY/34/2017	n/a	cattle	WRLFMD	Egypt	EA-3
PAT/8/2021	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/10/2021	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/7/2021	n/a	cattle	WRLFMD	Palestinian AT	EA-3
437694-0257/PAT/2021*	n/a	cattle	KVI	Palestinian AT	EA-3
EGY/7/2017	n/a	cattle	WRLFMD	Egypt	EA-3
Fayoum 4/Egy/2017*	MF322691	n/a	MEVAC	Egypt	EA-3
Sharkia 1/Egy/2017*	MF322684	n/a	MEVAC	Egypt	EA-3
EGY/30/2017	n/a	cattle	WRLFMD	Egypt	EA-3
EGY/10/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
Behira 1/Egy/2017*	MF322686	n/a	MEVAC	Egypt	EA-3
Cairo 1/Egy/2017*	MF322683	n/a	MEVAC	Egypt	EA-3
EGY/11/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
Gharbia 1/Egy/2017*	MF322685	n/a	MEVAC	Egypt	EA-3
EGY/22/2017	n/a	water buffalo	WRLFMD	Egypt	EA-3
Fayoum 2/Egy/2017*	MF322689	n/a	MEVAC	Egypt	EA-3
EGY/8/2017	n/a	cattle	WRLFMD	Egypt	EA-3
PAT/5/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3

continued on next page

label	accession	host(s)	lab	country	taxonomic information
PAT/7/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/2/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
PAT/10/2017	n/a	cattle	WRLFMD	Palestinian AT	EA-3
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
ETH/3/2004	FJ798109	cattle	WRLFMD	Ethiopia	EA-3
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
SRL/2/97	AJ303531	bovine	WRLFMD	Sri Lanka	ME-SA/Srl-97
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
LAO/2/2006	EU667451	cattle	WRLFMD	Laos	ME-SA/PanAsia
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