

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

Genotyping Report

FMDV serotype: O
Country: United Arab Emirates
Year: 2021
Batch: WRLFMD/2022/000008
No. of sequences: 7
Report date: 28th June 2022
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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

email: reporting@pirbright.ac.uk

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Virus sample name:	UAE/1/2021
Sender reference:	ADAFSA-1
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	09/04/2021
Host species:	Arabian oryx
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	08/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022
VIBASys IDs: sample 50948, genome 50949, sequence viba_50950, sequencing info 50951	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50954	UAE/2/2021	Arabian oryx	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50341	PAK/12/2021	water buffalo	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50373	PAK/23/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50385	PAK/40/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50357	PAK/16/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50329	PAK/7/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10

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_719	IRN/88/2009		91.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.9	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		89.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	89.3	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_850	NEP/1/2015	cattle	89.0	1	O	ME-SA	PanAsia-2	KAT-15
viba_666	IRN/18/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	PUN-10

Virus sample name:	UAE/2/2021
Sender reference:	ADAFSA-2
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	09/04/2021
Host species:	Arabian oryx
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	08/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022
VIBASys IDs: sample 50952, genome 50953, sequence viba_50954, sequencing info 50955	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50317	PAK/3/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50341	PAK/12/2021	water buffalo	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50373	PAK/23/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50385	PAK/40/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50357	PAK/16/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50329	PAK/7/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10

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_719	IRN/88/2009		91.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.9	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		89.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	89.3	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_850	NEP/1/2015	cattle	89.0	1	O	ME-SA	PanAsia-2	KAT-15
viba_666	IRN/18/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	PUN-10

Virus sample name:	UAE/9/2021
Sender reference:	ADAFSA-3
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	07/11/2021
Host species:	goat
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	10/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022

VIBASys IDs: sample 50956, genome 50957, sequence viba_50958, sequencing info 50959

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50966	UAE/11/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50962	UAE/10/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50970	UAE/14/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_50974	UAE/15/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_47032	IND/PD57/2018	water buffalo	94.5	0	O	ME-SA	SA-2018	
viba_47016	IND/PD42/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47056	IND/PD325/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47192	IND/IC202/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47579	SRL/1/2019	cattle	94.2	0	O	ME-SA	SA-2018	
viba_47196	IND/IC207/2018	cattle	94.2	0	O	ME-SA	SA-2018	

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_719	IRN/88/2009		91.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	91.3	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	91.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	91.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	90.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	90.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_705	KUW/3/97	bovine	89.4	0	O	ME-SA	Ind-2001	a

Virus sample name:	UAE/10/2021
Sender reference:	ADAFSA-4
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	07/11/2021
Host species:	goat
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	10/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022
VIBASys IDs: sample 50960, genome 50961, sequence viba_50962, sequencing info 50963	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50958	UAE/9/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50966	UAE/11/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50970	UAE/14/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_50974	UAE/15/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_47032	IND/PD57/2018	water buffalo	94.5	0	O	ME-SA	SA-2018	
viba_47016	IND/PD42/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47056	IND/PD325/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47192	IND/IC202/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47579	SRL/1/2019	cattle	94.2	0	O	ME-SA	SA-2018	
viba_47196	IND/IC207/2018	cattle	94.2	0	O	ME-SA	SA-2018	

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_719	IRN/88/2009		91.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	91.3	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	91.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	91.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	90.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	90.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_705	KUW/3/97	bovine	89.4	0	O	ME-SA	Ind-2001	a

Virus sample name:	UAE/11/2021
Sender reference:	ADAFSA-5
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	07/11/2021
Host species:	goat
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	10/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022
VIBASys IDs: sample 50964, genome 50965, sequence viba_50966, sequencing info 50967	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50958	UAE/9/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50962	UAE/10/2021	goat	100.0	0	O	ME-SA	SA-2018	
viba_50970	UAE/14/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_50974	UAE/15/2021	sheep	98.3	0	O	ME-SA	SA-2018	
viba_47032	IND/PD57/2018	water buffalo	94.5	0	O	ME-SA	SA-2018	
viba_47016	IND/PD42/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47056	IND/PD325/2018	cattle	94.5	0	O	ME-SA	SA-2018	
viba_47192	IND/IC202/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47579	SRL/1/2019	cattle	94.2	0	O	ME-SA	SA-2018	
viba_47196	IND/IC207/2018	cattle	94.2	0	O	ME-SA	SA-2018	

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_719	IRN/88/2009		91.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	91.3	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	91.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	91.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	90.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	90.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_705	KUW/3/97	bovine	89.4	0	O	ME-SA	Ind-2001	a

Virus sample name:	UAE/14/2021
Sender reference:	ADAFSA-14
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	05/12/2021
Host species:	sheep
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	10/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022
VIBASys IDs: sample 50968, genome 50969, sequence viba_50970, sequencing info 50971	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50974	UAE/15/2021	sheep	100.0	0	O	ME-SA	SA-2018	
viba_50958	UAE/9/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_50966	UAE/11/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_50962	UAE/10/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_47032	IND/PD57/2018	water buffalo	94.3	0	O	ME-SA	SA-2018	
viba_47016	IND/PD42/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47056	IND/PD325/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47192	IND/IC202/2018	cattle	94.2	0	O	ME-SA	SA-2018	
viba_47579	SRL/1/2019	cattle	94.0	0	O	ME-SA	SA-2018	
viba_47196	IND/IC207/2018	cattle	94.0	0	O	ME-SA	SA-2018	

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_719	IRN/88/2009		91.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	91.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	91.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	90.8	0	O	ME-SA	PanAsia-2	
viba_860	IRN/6/2015	cattle	90.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_285	UKG/35/2001	porcine	89.9	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	89.6	0	O	ME-SA	Ind-2001	a

Virus sample name:	UAE/15/2021
Sender reference:	ADAFSA-15
Location of origin:	n/a
Country of origin:	United Arab Emirates
Date of collection:	05/12/2021
Host species:	sheep
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	10/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	16/06/2022
Created:	28/06/2022
Last updated:	28/06/2022

VIBASys IDs: sample 50972, genome 50973, sequence viba_50974, sequencing info 50975

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50970	UAE/14/2021	sheep	100.0	0	O	ME-SA	SA-2018	
viba_50958	UAE/9/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_50966	UAE/11/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_50962	UAE/10/2021	goat	98.3	0	O	ME-SA	SA-2018	
viba_47032	IND/PD57/2018	water buffalo	94.3	0	O	ME-SA	SA-2018	
viba_47016	IND/PD42/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47056	IND/PD325/2018	cattle	94.3	0	O	ME-SA	SA-2018	
viba_47192	IND/IC202/2018	cattle	94.2	0	O	ME-SA	SA-2018	
viba_47579	SRL/1/2019	cattle	94.0	0	O	ME-SA	SA-2018	
viba_47196	IND/IC207/2018	cattle	94.0	0	O	ME-SA	SA-2018	

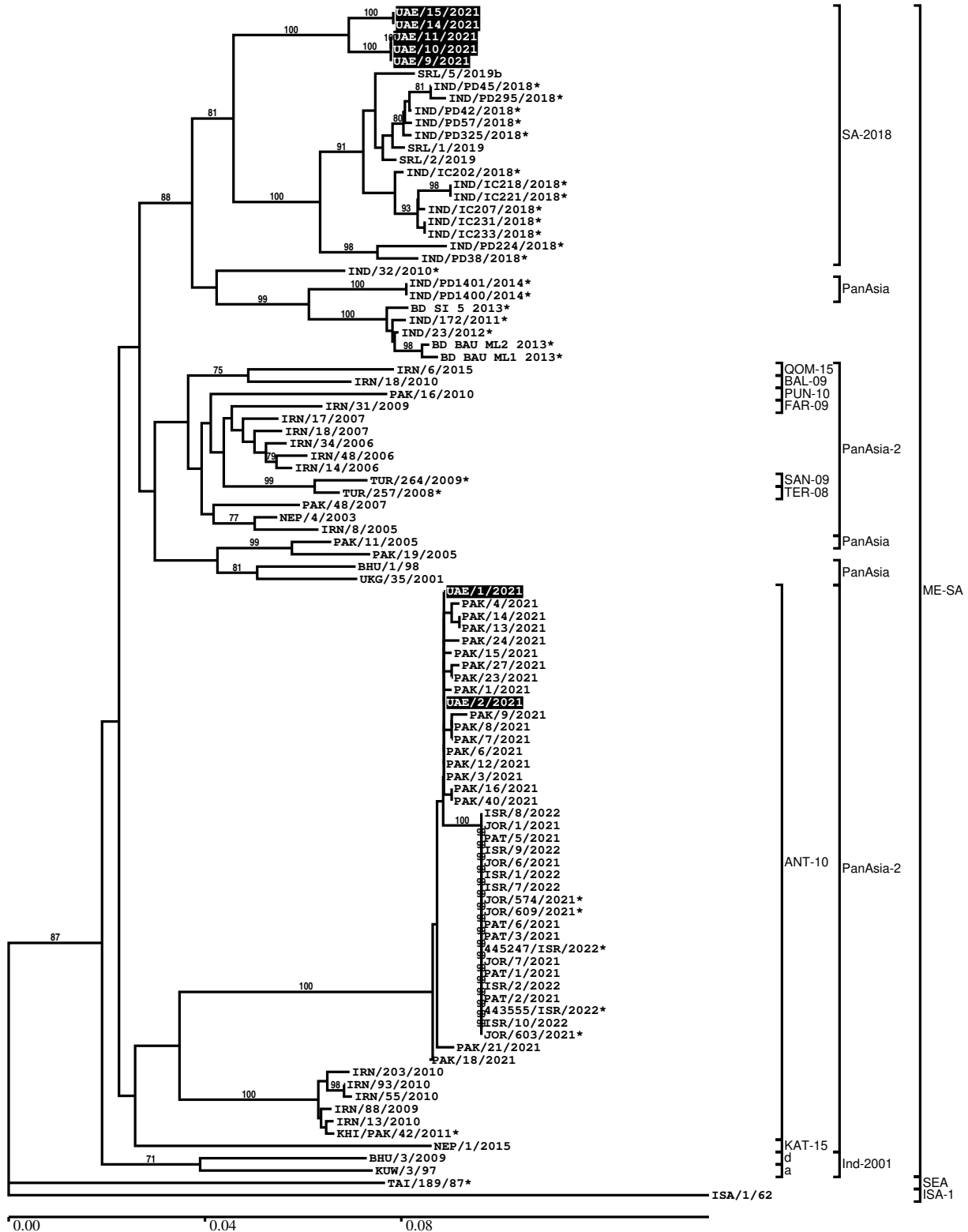
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_719	IRN/88/2009		91.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	91.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	91.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	90.8	0	O	ME-SA	PanAsia-2	
viba_860	IRN/6/2015	cattle	90.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_285	UKG/35/2001	porcine	89.9	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	89.6	0	O	ME-SA	Ind-2001	a

Report on FMDV O in United Arab Emirates in 2021

Batch: WRLFMD/2022/000008



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor: vp1_O
 Query sequence set: WRLFMD/2022/000008-United Arab Emirates-O (7 sequences)
 Sequence database set: allseqs_O (5626 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: 12
 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
UAE/15/2021	n/a	sheep	WRLFMD	United Arab Emirates	ME-SA/SA-2018
UAE/14/2021	n/a	sheep	WRLFMD	United Arab Emirates	ME-SA/SA-2018
UAE/11/2021	n/a	goat	WRLFMD	United Arab Emirates	ME-SA/SA-2018
UAE/10/2021	n/a	goat	WRLFMD	United Arab Emirates	ME-SA/SA-2018
UAE/9/2021	n/a	goat	WRLFMD	United Arab Emirates	ME-SA/SA-2018
SRL/5/2019b	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/SA-2018
IND/PD45/2018*	MT918997	cattle	PD-FMD	India	ME-SA/SA-2018
IND/PD295/2018*	MT919004	cattle	PD-FMD	India	ME-SA/SA-2018
IND/PD42/2018*	MT918995	cattle	PD-FMD	India	ME-SA/SA-2018
IND/PD57/2018*	MT918999	water buffalo	PD-FMD	India	ME-SA/SA-2018
IND/PD325/2018*	MT919005	cattle	PD-FMD	India	ME-SA/SA-2018
SRL/1/2019	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/SA-2018
SRL/2/2019	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/SA-2018
IND/IC202/2018*	MT936110	cattle	PD-FMD	India	ME-SA/SA-2018
IND/IC218/2018*	MT936113	cattle	PD-FMD	India	ME-SA/SA-2018
IND/IC221/2018*	MT936114	cattle	PD-FMD	India	ME-SA/SA-2018
IND/IC207/2018*	MT936111	cattle	PD-FMD	India	ME-SA/SA-2018
IND/IC231/2018*	MT936115	cattle	PD-FMD	India	ME-SA/SA-2018
IND/IC233/2018*	MT936116	cattle	PD-FMD	India	ME-SA/SA-2018
IND/PD224/2018*	MT919002	cattle	PD-FMD	India	ME-SA/SA-2018
IND/PD38/2018*	MT918994	cattle	PD-FMD	India	ME-SA/SA-2018
IND/32/2010*	KC506435	cattle	PD-FMD	India	ME-SA
IND/PD1401/2014*	MT909602	cattle	PD-FMD	India	ME-SA/PanAsia
IND/PD1400/2014*	MT909601	cattle	PD-FMD	India	ME-SA/PanAsia
BD SI 5 2013*	KT037118	cattle	Bangladesh Agri Univ	Bangladesh	ME-SA
IND/172/2011*	KC506438	cattle	PD-FMD	India	ME-SA
IND/23/2012*	KC506439	cattle	PD-FMD	India	ME-SA
BD BAU ML2 2013*	KT982203	cattle	Bangladesh Agri Univ	Bangladesh	ME-SA
BD BAU ML1 2013*	KT960948	cattle	Bangladesh Agri Univ	Bangladesh	ME-SA

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label	accession	host(s)	lab	country	taxonomic information
IRN/6/2015	MN276044	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/17/2007	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/18/2007	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/34/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/48/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/14/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
TUR/264/2009*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/SAN-09
TUR/257/2008*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/TER-08
PAK/48/2007	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2
NEP/4/2003	DQ165059	n/a	WRLFMD	Nepal	ME-SA/PanAsia-2
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
PAK/11/2005	n/a	water buffalo	WRLFMD	Pakistan	ME-SA/PanAsia
PAK/19/2005	n/a	cattle	WRLFMD	Pakistan	ME-SA
BHU/1/98	AJ318826	n/a	WRLFMD	Bhutan	ME-SA/PanAsia
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
UAE/1/2021	n/a	Arabian oryx	WRLFMD	United Arab Emirates	ME-SA/PanAsia-2/ANT-10
PAK/4/2021	n/a	water buffalo	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/14/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/13/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/24/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/15/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/27/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/23/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/1/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
UAE/2/2021	n/a	Arabian oryx	WRLFMD	United Arab Emirates	ME-SA/PanAsia-2/ANT-10
PAK/9/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/8/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/7/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/6/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/12/2021	n/a	water buffalo	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/3/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/16/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/40/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
ISR/8/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/1/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
PAT/5/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
ISR/9/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/6/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
ISR/1/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
ISR/7/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/574/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/609/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
PAT/6/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAT/3/2021	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
445247/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
JOR/7/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
PAT/1/2021	n/a	cattle	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
ISR/2/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
PAT/2/2021	n/a	cattle	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
443555/ISR/2022*	n/a	sheep	KVI	Israel	ME-SA/PanAsia-2/ANT-10
ISR/10/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/603/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
PAK/21/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/18/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/203/2010	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/93/2010	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/55/2010	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/13/2010	n/a	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
KHI/PAK/42/2011*	JX170757	water buffalo	PIADC/LINDHOLM	Pakistan	ME-SA/PanAsia-2/ANT-10
NEP/1/2015	MN276045	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d

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KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available