

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

Genotyping Report

FMDV serotype: O
Country: Iran
Year: 2023
Batch: WRLMEG/2023/00007
No. of sequences: 8
Report date: 10th March 2023
Report generated by: Nick Knowles
Report checked by: Don King



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Virus sample name:	IRN/a4731/2023
Sender reference:	a4731
Location of origin:	Golestan
Country of origin:	Iran
Date of collection:	17/01/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52619, genome 52620, sequence viba_52621, sequencing info 52622	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	97.3	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		90.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.9	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	88.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.8	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_47579	SRL/1/2019	cattle	88.5	0	O	ME-SA	SA-2018	
viba_505	TUR/264/2009		88.5	0	O	ME-SA	PanAsia-2	SAN-09
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_27877	SRL/2/97	bovine	88.3	0	O	ME-SA	Srl-97	

Virus sample name:	IRN/a4701/2023
Sender reference:	a4701
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	31/01/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52623, genome 52624, sequence viba_52625, sequencing info 52626	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		97.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	97.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	97.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	97.0	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		90.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.9	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	88.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.8	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_47579	SRL/1/2019	cattle	88.5	0	O	ME-SA	SA-2018	
viba_505	TUR/264/2009		88.5	0	O	ME-SA	PanAsia-2	SAN-09
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	88.2	0	O	ME-SA	Ind-2001	d

Virus sample name:	IRN/a4703/2023
Sender reference:	a4703
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	31/01/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52627, genome 52628, sequence viba_52629, sequencing info 52630	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	97.2	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		90.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.8	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.6	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_47579	SRL/1/2019	cattle	88.3	0	O	ME-SA	SA-2018	
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_354	PAK/16/2010	cattle	88.2	0	O	ME-SA	PanAsia-2	PUN-10
viba_27877	SRL/2/97	bovine	88.2	0	O	ME-SA	Srl-97	

Virus sample name:	IRN/a471/2023
Sender reference:	a471
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	31/01/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52631, genome 52632, sequence viba_52633, sequencing info 52634	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50385	PAK/40/2021	cattle	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50357	PAK/16/2021	cattle	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	89.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		89.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	89.6	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		83.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_285	UKG/35/2001	porcine	82.5	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	82.4	0	O	ME-SA	Ind-2001	d
viba_666	IRN/18/2010	cattle	82.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	81.9	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	81.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		81.8	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		81.8	0	O	ME-SA	PanAsia-2	SAN-09
viba_9021	LAO/2/2006	cattle	81.6	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	81.6	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	IRN/a4992/2023
Sender reference:	a4992
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	02/02/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52635, genome 52636, sequence viba_52637, sequencing info 52638	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	95.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		95.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	95.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	95.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	95.4	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		88.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.0	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	86.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		86.9	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	86.8	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	86.8	1	O	ME-SA	PanAsia-2	KAT-15
viba_666	IRN/18/2010	cattle	86.7	0	O	ME-SA	PanAsia-2	BAL-09
viba_505	TUR/264/2009		86.7	0	O	ME-SA	PanAsia-2	SAN-09
viba_293	BHU/3/2009	cattle	86.6	0	O	ME-SA	Ind-2001	d
viba_354	PAK/16/2010	cattle	86.6	0	O	ME-SA	PanAsia-2	PUN-10

Virus sample name:	IRN/a4993/2023
Sender reference:	a4993
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	02/02/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52639, genome 52640, sequence viba_52641, sequencing info 52642	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	96.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		96.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	96.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	96.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	96.1	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		89.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	87.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	87.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_9021	LAO/2/2006	cattle	87.4	0	O	ME-SA	PanAsia	
viba_491	TUR/257/2008		87.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	87.4	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	87.2	0	O	ME-SA	Ind-2001	d
viba_47579	SRL/1/2019	cattle	87.2	0	O	ME-SA	SA-2018	
viba_850	NEP/1/2015	cattle	87.2	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/a4994/2023
Sender reference:	a4994
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	02/02/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52643, genome 52644, sequence viba_52645, sequencing info 52646	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	97.3	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		90.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.9	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	88.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.8	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_47579	SRL/1/2019	cattle	88.5	0	O	ME-SA	SA-2018	
viba_505	TUR/264/2009		88.5	0	O	ME-SA	PanAsia-2	SAN-09
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_27877	SRL/2/97	bovine	88.3	0	O	ME-SA	Srl-97	

Virus sample name:	IRN/a4995/2023
Sender reference:	a4995
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	02/02/2023
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	22/02/2023
Last updated:	22/02/2023
VIBASys IDs: sample 52647, genome 52648, sequence viba_52649, sequencing info 52650	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50341	PAK/12/2021	water buffalo	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50954	UAE/2/2021	Arabian oryx	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50325	PAK/6/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50381	PAK/27/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50950	UAE/1/2021	Arabian oryx	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_50317	PAK/3/2021	cattle	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_52157	ICFMD/IND/216/2021		97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50369	PAK/21/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50333	PAK/8/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_50313	PAK/1/2021	cattle	97.2	0	O	ME-SA	PanAsia-2	ANT-10

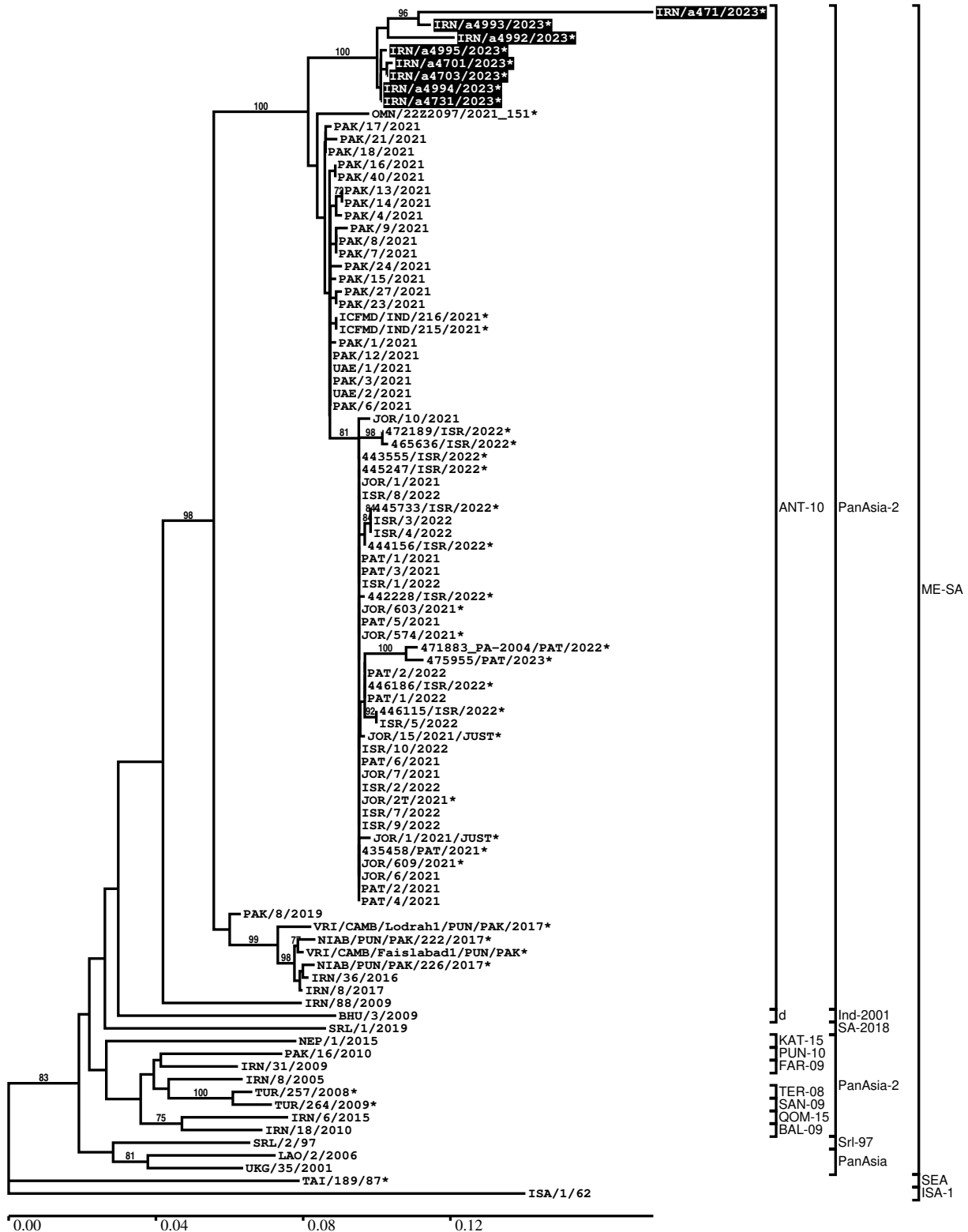
Most Closely Related Prototype Sequences

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		90.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.8	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.6	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_27877	SRL/2/97	bovine	88.4	0	O	ME-SA	Srl-97	
viba_47579	SRL/1/2019	cattle	88.3	0	O	ME-SA	SA-2018	
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_354	PAK/16/2010	cattle	88.2	0	O	ME-SA	PanAsia-2	PUN-10

Report on FMDV O in Iran in 2023

Batch: WRLMEG/2023/00007



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2023/00007-Iran-O (8 sequences)
Sequence database set:	allseqs_O (5861 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:	14
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
IRN/a471/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4993/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4992/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4995/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4701/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4703/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4994/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
IRN/a4731/2023*	n/a	bovine	IVO	Iran	ME-SA/PanAsia-2/ANT-10
OMN/22Z2097/2021_151*	n/a	cattle	ANSES	Oman	ME-SA/PanAsia-2/ANT-10
PAK/17/2021	n/a	cattle	WRLFMD	Pakistan	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
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
PAK/13/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/14/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/4/2021	n/a	water buffalo	WRLFMD	Pakistan	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

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label	accession	host(s)	lab	country	taxonomic information
PAK/7/2021	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
ICFMD/IND/216/2021*	n/a	n/a	DFMD	India	ME-SA/PanAsia-2/ANT-10
ICFMD/IND/215/2021*	n/a	n/a	DFMD	India	ME-SA/PanAsia-2/ANT-10
PAK/1/2021	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
UAE/1/2021	n/a	Arabian oryx	WRLFMD	United Arab Emirates	ME-SA/PanAsia-2/ANT-10
PAK/3/2021	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/6/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
JOR/10/2021	n/a	sheep	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
472189/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
465636/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
443555/ISR/2022*	n/a	sheep	KVI	Israel	ME-SA/PanAsia-2/ANT-10
445247/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
JOR/1/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
ISR/8/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
445733/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
ISR/3/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
ISR/4/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
444156/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
PAT/1/2021	n/a	cattle	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAT/3/2021	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
ISR/1/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
442228/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
JOR/603/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
PAT/5/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
JOR/574/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
471883_PA-2004/PAT/2022*	n/a	sheep	KVI	Palestinian AT	ME-SA/PanAsia-2/ANT-10
475955/PAT/2023*	n/a	n/a	KVI	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAT/2/2022	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
446186/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10

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label	accession	host(s)	lab	country	taxonomic information
PAT/1/2022	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
446115/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
ISR/5/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/15/2021/JUST*	n/a	sheep	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
ISR/10/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
PAT/6/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
JOR/7/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
ISR/2/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/2T/2021*	n/a	sheep	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
ISR/7/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
ISR/9/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
JOR/1/2021/JUST*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
435458/PAT/2021*	n/a	sheep	KVI	Palestinian AT	ME-SA/PanAsia-2/ANT-10
JOR/609/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/6/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
PAT/2/2021	n/a	cattle	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAT/4/2021	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAK/8/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah1/PUN/PAK/2017*	MK342179	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/222/2017*	MH085206	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Faislabad1/PUN/PAK*	MK292142	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/226/2017*	MH085208	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/36/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/8/2017	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
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
SRL/1/2019	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/SA-2018
NEP/1/2015	MN276045	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
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/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
TUR/257/2008*	n/a	n/a	FMDI- Ankara	Turkey	ME-SA/PanAsia-2/TER-08
TUR/264/2009*	n/a	n/a	FMDI- Ankara	Turkey	ME-SA/PanAsia-2/SAN-09
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
SRL/2/97	AJ303531	bovine	WRLFMD	Sri Lanka	ME-SA/Srl-97
LAO/2/2006	EU667451	cattle	WRLFMD	Laos	ME-SA/PanAsia

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label	accession	host(s)	lab	country	taxonomic information
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
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