

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

## Genotyping Report

FMDV serotype: O  
Country: Iran  
Year: 2020, 2021  
Batch: WRLFMD/2021/00009  
No. of sequences: 22  
Report date: 12th August 2021  
Report generated by: Nick Knowles  
Report checked by: Hayley Hicks



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Virus sample name:	IRN/4/2020
Sender reference:	IR/1400/73
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	22/07/2020
Host species:	bovine
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:	13/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48388, genome 48389, sequence viba\_48390, sequencing info 48391

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48434	IRN/22/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48406	IRN/9/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.3	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.9	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.0	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/5/2020
Sender reference:	IR/1400/74
Location of origin:	Mazandaran
Country of origin:	Iran
Date of collection:	23/07/2020
Host species:	bovine
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:	14/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48392, genome 48393, sequence viba_48394, sequencing info 48395	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48434	IRN/22/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_45460	TUR/156/2020.635	cattle	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.3	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		90.0	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	PUN-10
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		89.4	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.2	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/7/2020
Sender reference:	IR/1400/75
Location of origin:	Kordestan
Country of origin:	Iran
Date of collection:	28/07/2020
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	16/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48396, genome 48397, sequence viba\_48398, sequencing info 48399

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48434	IRN/22/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48430	IRN/21/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.3	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		92.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		90.2	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.7	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.6	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.5	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/8/2020
Sender reference:	IR/1400/66
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	20/08/2020
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	16/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48400, genome 48401, sequence viba_48402, sequencing info 48403	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48394	IRN/5/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_45460	TUR/156/2020.635	cattle	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48430	IRN/21/2020	bovine	98.1	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		91.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		90.0	0	O	ME-SA	PanAsia-2	TER-08
viba_766	IRN/31/2009	cattle	89.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	89.6	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	BAL-09
viba_860	IRN/6/2015	cattle	88.2	0	O	ME-SA	PanAsia-2	QOM-15
viba_541	OMN/7/2001	bovine	88.0	0	O	ME-SA	Ind-2001	b

Virus sample name:	IRN/9/2020
Sender reference:	IR/1400/36
Location of origin:	Kordestan
Country of origin:	Iran
Date of collection:	22/08/2020
Host species:	bovine
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:	14/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48404, genome 48405, sequence viba_48406, sequencing info 48407	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48390	IRN/4/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	97.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	97.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	97.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	97.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	97.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	97.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	97.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	97.5	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		91.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		89.3	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_666	IRN/18/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.8	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		88.6	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15
viba_705	KUW/3/97	bovine	87.8	0	O	ME-SA	Ind-2001	a

Virus sample name:	IRN/10/2020
Sender reference:	IR/1400/71
Location of origin:	Kordestan
Country of origin:	Iran
Date of collection:	01/10/2020
Host species:	bovine
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:	13/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48408, genome 48409, sequence viba_48410, sequencing info 48411	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48426	IRN/17/2020	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	99.2	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		92.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.9	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.7	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		89.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_30238	MUR/19/2016	cattle	88.6	0	O	ME-SA	Ind-2001	e

Virus sample name:	IRN/11/2020
Sender reference:	IR/1400/56
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	22/10/2020
Host species:	sheep
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:	14/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48412, genome 48413, sequence viba\_48414, sequencing info 48415

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48442	IRN/7/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.6	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.9	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_30238	MUR/19/2016	cattle	88.3	0	O	ME-SA	Ind-2001	e



Virus sample name:	IRN/15/2020
Sender reference:	IR/1400/57
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	16/11/2020
Host species:	sheep
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:	15/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48416, genome 48417, sequence viba_48418, sequencing info 48419	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48434	IRN/22/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_45460	TUR/156/2020.635	cattle	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48430	IRN/21/2020	bovine	98.3	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		90.5	0	O	ME-SA	PanAsia-2	TER-08
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	90.0	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.6	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/16/2020
Sender reference:	IR/1400/65
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	17/11/2020
Host species:	bovine
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:	15/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48420, genome 48421, sequence viba_48422, sequencing info 48423	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48410	IRN/10/2020	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	98.7	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		91.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_285	UKG/35/2001	porcine	88.6	0	O	ME-SA	PanAsia	
viba_30238	MUR/19/2016	cattle	88.2	0	O	ME-SA	Ind-2001	e

Virus sample name:	IRN/17/2020
Sender reference:	IR/1400/62
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	21/11/2020
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	17/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48424, genome 48425, sequence viba_48426, sequencing info 48427	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48410	IRN/10/2020	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	98.7	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		92.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		90.0	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.9	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.7	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		89.4	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	89.1	0	O	ME-SA	PanAsia-2	QOM-15
viba_285	UKG/35/2001	porcine	88.9	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.3	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/21/2020
Sender reference:	IR/1400/61
Location of origin:	Tehran
Country of origin:	Iran
Date of collection:	07/12/2020
Host species:	bovine
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:	15/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48428, genome 48429, sequence viba_48430, sequencing info 48431	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48446	IRN/10/2021	sheep	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48438	IRN/3/2021	bovine	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.3	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		91.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.1	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.7	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.6	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.3	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.5	0	O	ME-SA	PanAsia-2	QOM-15
viba_541	OMN/7/2001	bovine	88.5	0	O	ME-SA	Ind-2001	b

Virus sample name:	IRN/22/2020
Sender reference:	IR/1400/55
Location of origin:	Kordestan
Country of origin:	Iran
Date of collection:	09/12/2020
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	20/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48432, genome 48433, sequence viba_48434, sequencing info 48435	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48390	IRN/4/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_45460	TUR/156/2020.635	cattle	98.6	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		92.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-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_650	IRN/8/2005	ovine	89.7	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.6	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.3	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/3/2021
Sender reference:	IR/1400/53
Location of origin:	Tehran
Country of origin:	Iran
Date of collection:	20/01/2021
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	06/08/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48436, genome 48437, sequence viba_48438, sequencing info 48439	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48430	IRN/21/2020	bovine	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48446	IRN/10/2021	sheep	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.1	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		91.7	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_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_541	OMN/7/2001	bovine	88.6	0	O	ME-SA	Ind-2001	b
viba_30238	MUR/19/2016	cattle	88.5	0	O	ME-SA	Ind-2001	e

Virus sample name:	IRN/7/2021
Sender reference:	IR/1400/47
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	07/02/2021
Host species:	bovine
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:	21/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48440, genome 48441, sequence viba\_48442, sequencing info 48443

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48474	IRN/25/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.4	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		91.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.7	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.9	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.5	0	O	ME-SA	PanAsia-2	QOM-15
viba_293	BHU/3/2009	cattle	88.5	0	O	ME-SA	Ind-2001	d

Virus sample name:	IRN/10/2021
Sender reference:	IR/1400/43
Location of origin:	East Azerbaijan
Country of origin:	Iran
Date of collection:	15/02/2021
Host species:	sheep
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:	21/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48444, genome 48445, sequence viba\_48446, sequencing info 48447

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48430	IRN/21/2020	bovine	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48438	IRN/3/2021	bovine	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48434	IRN/22/2020	bovine	98.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_45468	TUR/178/2020.75	cattle	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	98.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.1	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.9	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.7	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		89.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.3	1	O	ME-SA	PanAsia-2	KAT-15



Virus sample name:	IRN/11/2021
Sender reference:	IR/1400/41
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	01/03/2021
Host species:	bovine
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	06/08/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48448, genome 48449, sequence viba_48450, sequencing info 48451	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48454	IRN/12/2021	bovine	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.6	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_860	IRN/6/2015	cattle	88.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	88.8	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.5	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/12/2021
Sender reference:	IR/1400/42
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	01/03/2021
Host species:	bovine
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:	21/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48452, genome 48453, sequence viba_48454, sequencing info 48455	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48450	IRN/11/2021	bovine	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.6	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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_860	IRN/6/2015	cattle	88.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	88.8	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.5	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/13/2021
Sender reference:	IR/1400/40
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	02/03/2021
Host species:	sheep
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:	21/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48456, genome 48457, sequence viba_48458, sequencing info 48459	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48450	IRN/11/2021	bovine	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.4	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		91.8	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_491	TUR/257/2008		89.4	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	PUN-10
viba_860	IRN/6/2015	cattle	88.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		88.8	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	88.6	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.3	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/17/2021
Sender reference:	IR/1400/37
Location of origin:	Zanjan
Country of origin:	Iran
Date of collection:	18/04/2021
Host species:	sheep
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:	22/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48460, genome 48461, sequence viba\_48462, sequencing info 48463

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48434	IRN/22/2020	bovine	98.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48390	IRN/4/2020	bovine	97.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_42512	PAK/32/2019	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48430	IRN/21/2020	bovine	97.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48394	IRN/5/2020	bovine	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48446	IRN/10/2021	sheep	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48418	IRN/15/2020	sheep	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48398	IRN/7/2020	bovine	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48438	IRN/3/2021	bovine	97.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_48402	IRN/8/2020	bovine	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		92.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_354	PAK/16/2010	cattle	90.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_766	IRN/31/2009	cattle	90.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	89.4	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	89.3	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.6	0	O	ME-SA	PanAsia-2	QOM-15
viba_850	NEP/1/2015	cattle	88.5	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/19/2021
Sender reference:	IR/1400/33
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	28/04/2021
Host species:	bovine
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:	13/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48464, genome 48465, sequence viba_48466, sequencing info 48467	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48410	IRN/10/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	98.6	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		92.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	89.6	0	O	ME-SA	PanAsia-2	
viba_860	IRN/6/2015	cattle	89.3	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_285	UKG/35/2001	porcine	89.0	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		88.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_850	NEP/1/2015	cattle	88.6	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/21/2021
Sender reference:	IR/1400/32
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	16/05/2021
Host species:	bovine
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:	23/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021
VIBASys IDs: sample 48468, genome 48469, sequence viba_48470, sequencing info 48471	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48450	IRN/11/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48474	IRN/25/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48442	IRN/7/2021	bovine	98.4	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.1	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	88.9	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	PUN-10
viba_860	IRN/6/2015	cattle	88.5	0	O	ME-SA	PanAsia-2	QOM-15
viba_505	TUR/264/2009		88.5	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.3	1	O	ME-SA	PanAsia-2	KAT-15

Virus sample name:	IRN/25/2021
Sender reference:	IR/1400/26
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	07/06/2021
Host species:	bovine
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:	23/07/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	09/08/2021
Created:	12/08/2021
Last updated:	12/08/2021

VIBASys IDs: sample 48472, genome 48473, sequence viba\_48474, sequencing info 48475

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48442	IRN/7/2021	bovine	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_48410	IRN/10/2020	bovine	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48414	IRN/11/2020	sheep	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_48426	IRN/17/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48422	IRN/16/2020	bovine	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_48466	IRN/19/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48450	IRN/11/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48454	IRN/12/2021	bovine	98.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_48470	IRN/21/2021	bovine	98.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_48458	IRN/13/2021	sheep	98.6	0	O	ME-SA	PanAsia-2	ANT-10

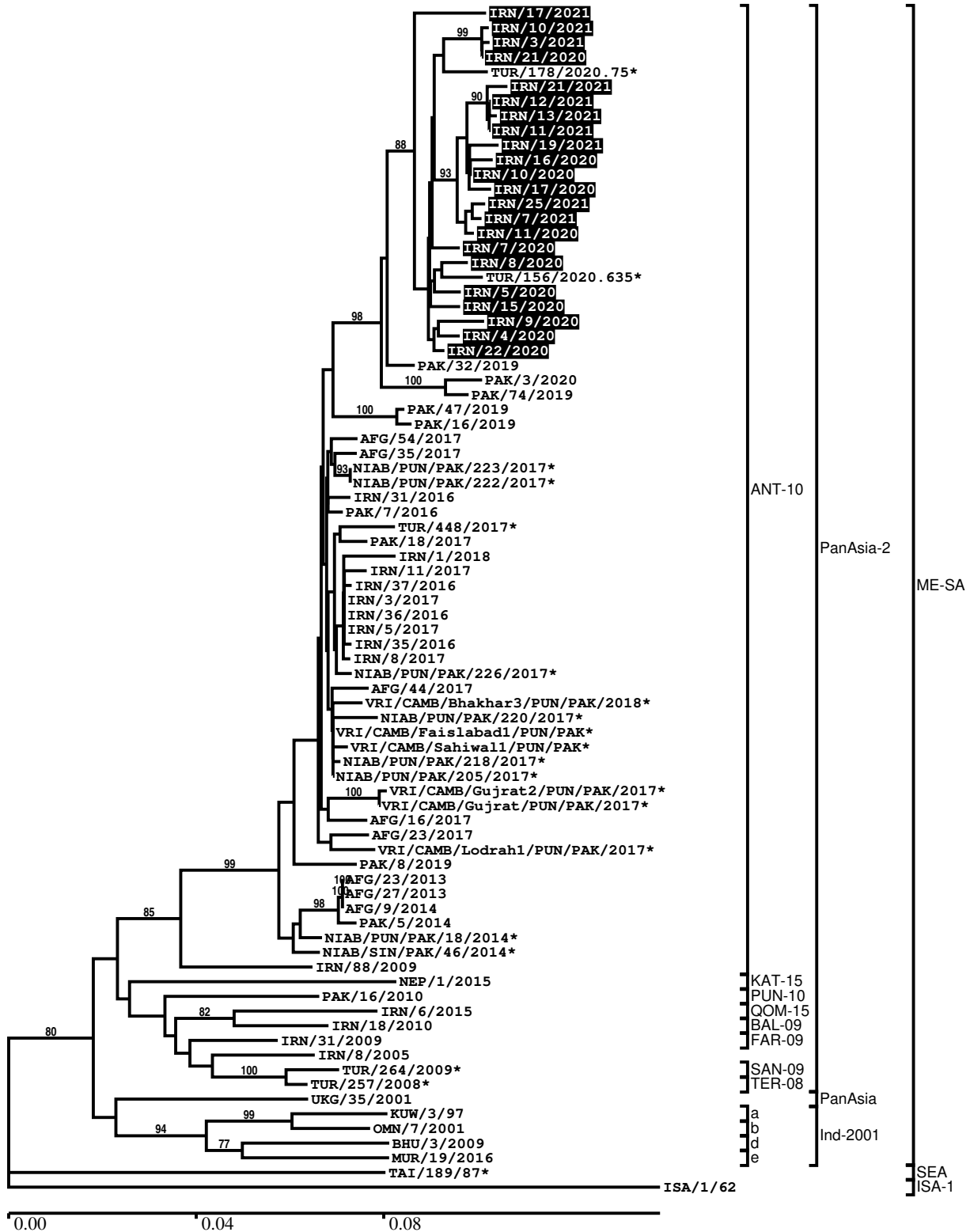
### Most Closely Related Prototype Sequences

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		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		89.6	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		89.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_666	IRN/18/2010	cattle	89.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	88.8	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15
viba_30238	MUR/19/2016	cattle	88.3	0	O	ME-SA	Ind-2001	e

Report on FMDV O in Iran in 2020, 2021

Batch: WRLFMD/2021/00009



\*, not a WRLFMD Reference Number



## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2021/00009-Iran-O (22 sequences)
Sequence database set:	allseqs_O (5286 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:	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/17/2021	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/10/2021	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/3/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/21/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
TUR/178/2020.75*	n/a	cattle	FMDI	Turkey	ME-SA/PanAsia-2/ANT-10
IRN/21/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/12/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/13/2021	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/11/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/19/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/16/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/10/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/17/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/25/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/7/2021	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/11/2020	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/7/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/8/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
TUR/156/2020.635*	n/a	cattle	FMDI	Turkey	ME-SA/PanAsia-2/ANT-10

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label	accession	host(s)	lab	country	taxonomic information
IRN/5/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/15/2020	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/9/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/4/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/22/2020	n/a	bovine	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
PAK/32/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/3/2020	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/74/2019	n/a	water buffalo	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/47/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/16/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/54/2017	n/a	bovine	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/35/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/223/2017*	MH085207	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/222/2017*	MH085206	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/31/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
PAK/7/2016	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
TUR/448/2017*	n/a	sheep	FMDI	Turkey	ME-SA/PanAsia-2/ANT-10
PAK/18/2017	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/1/2018	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/11/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/37/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/3/2017	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/36/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/5/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/35/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/8/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/226/2017*	MH085208	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/44/2017	n/a	bovine	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar3/PUN/PAK/2018*	MK342186	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/220/2017*	MH085205	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Faisalabad1/PUN/PAK*	MK292142	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Sahiwal1/PUN/PAK*	MK292143	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/218/2017*	MH085204	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/205/2017*	MF140436	water buffalo	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Gujrat2/PUN/PAK/2017*	MK342183	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10

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label	accession	host(s)	lab	country	taxonomic information
VRI/CAMB/Gujrat/PUN/PAK/2017*	MK342182	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/16/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/23/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah1/PUN/PAK/2017*	MK342179	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/8/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/23/2013	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/27/2013	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/9/2014	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
PAK/5/2014	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/18/2014*	MF374991	cattle	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/SIN/PAK/46/2014*	MF374989	cattle	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
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/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
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/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
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

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n/a, not available