

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

## Genotyping Report

FMDV serotype: O  
Country: Israel  
Year: 2022  
Batch: WRLFMD/2022/000011  
No. of sequences: 9  
Report date: 12th June 2022  
Report generated by: Nick Knowles  
Report checked by: Jemma Wadsworth



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

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Virus sample name:	ISR/1/2022
Sender reference:	442976
Location of origin:	Kfar Yehoshua, Hazafon
Country of origin:	Israel
Date of collection:	10/02/2022
Host species:	cattle
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:	24/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50656, genome 50657, sequence viba\_50658, sequencing info 50659

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50686	ISR/9/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50678	ISR/7/2022	cattle	100.0	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/2/2022
Sender reference:	442976 P1
Location of origin:	Kfar Yehoshua, Hazafon
Country of origin:	Israel
Date of collection:	10/02/2022
Host species:	cattle
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:	24/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50660, genome 50661, sequence viba\_50662, sequencing info 50663

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50686	ISR/9/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50678	ISR/7/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49951	JOR/574/2021	cattle	100.0	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/3/2022
Sender reference:	445733-2
Location of origin:	Sde Ya' aqov, Hazafon
Country of origin:	Israel
Date of collection:	08/03/2022
Host species:	cattle
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:	24/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50664, genome 50665, sequence viba\_50666, sequencing info 50667

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50416	445733/ISR/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50670	ISR/4/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50408	444156/ISR/2022	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50686	ISR/9/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	99.7	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_293	BHU/3/2009	cattle	88.8	0	O	ME-SA	Ind-2001	d
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/4/2022
Sender reference:	445733 P2
Location of origin:	Sde Ya'aqov, Hazafon
Country of origin:	Israel
Date of collection:	08/03/2022
Host species:	cattle
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:	24/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50668, genome 50669, sequence viba\_50670, sequencing info 50671

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50666	ISR/3/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50416	445733/ISR/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50408	444156/ISR/2022	cattle	99.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_50686	ISR/9/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	99.7	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_293	BHU/3/2009	cattle	88.8	0	O	ME-SA	Ind-2001	d
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/5/2022
Sender reference:	446115
Location of origin:	Kalia, Jerusalem
Country of origin:	Israel
Date of collection:	09/03/2022
Host species:	cattle
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:	24/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50672, genome 50673, sequence viba\_50674, sequencing info 50675

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50420	446115/ISR/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50735	PAT/1/2022	sheep	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50424	446186/ISR/2022	cattle	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50739	PAT/2/2022	sheep	99.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_50686	ISR/9/2022	cattle	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	99.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	99.5	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		91.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.1	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	88.8	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	88.8	0	O	ME-SA	Ind-2001	d
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_491	TUR/257/2008		88.6	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.0	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.0	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.0	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/7/2022
Sender reference:	447659
Location of origin:	Neve Yaar, Hazafon
Country of origin:	Israel
Date of collection:	24/03/2022
Host species:	cattle
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:	25/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50676, genome 50677, sequence viba\_50678, sequencing info 50679

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50686	ISR/9/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49951	JOR/574/2021	cattle	100.0	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/8/2022
Sender reference:	447659 P1
Location of origin:	Neve Yaar, Hazafon
Country of origin:	Israel
Date of collection:	24/03/2022
Host species:	cattle
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:	25/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50680, genome 50681, sequence viba\_50682, sequencing info 50683

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50686	ISR/9/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50678	ISR/7/2022	cattle	100.0	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15



Virus sample name:	ISR/9/2022
Sender reference:	448101
Location of origin:	Nitzanei Oz, Hamerkaz
Country of origin:	Israel
Date of collection:	29/03/2022
Host species:	cattle
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:	25/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50684, genome 50685, sequence viba\_50686, sequencing info 50687

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50690	ISR/10/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50678	ISR/7/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49951	JOR/574/2021	cattle	100.0	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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	ISR/10/2022
Sender reference:	448101 P2
Location of origin:	Nitzanei Oz, Hamerkaz
Country of origin:	Israel
Date of collection:	29/03/2022
Host species:	cattle
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:	25/05/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/06/2022
Created:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50688, genome 50689, sequence viba\_50690, sequencing info 50691

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50686	ISR/9/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49959	JOR/609/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50010	JOR/6/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50703	PAT/3/2021	sheep	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50662	ISR/2/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50006	JOR/1/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50715	PAT/6/2021	goat	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50014	JOR/7/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_50678	ISR/7/2022	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_49951	JOR/574/2021	cattle	100.0	0	O	ME-SA	PanAsia-2	ANT-10

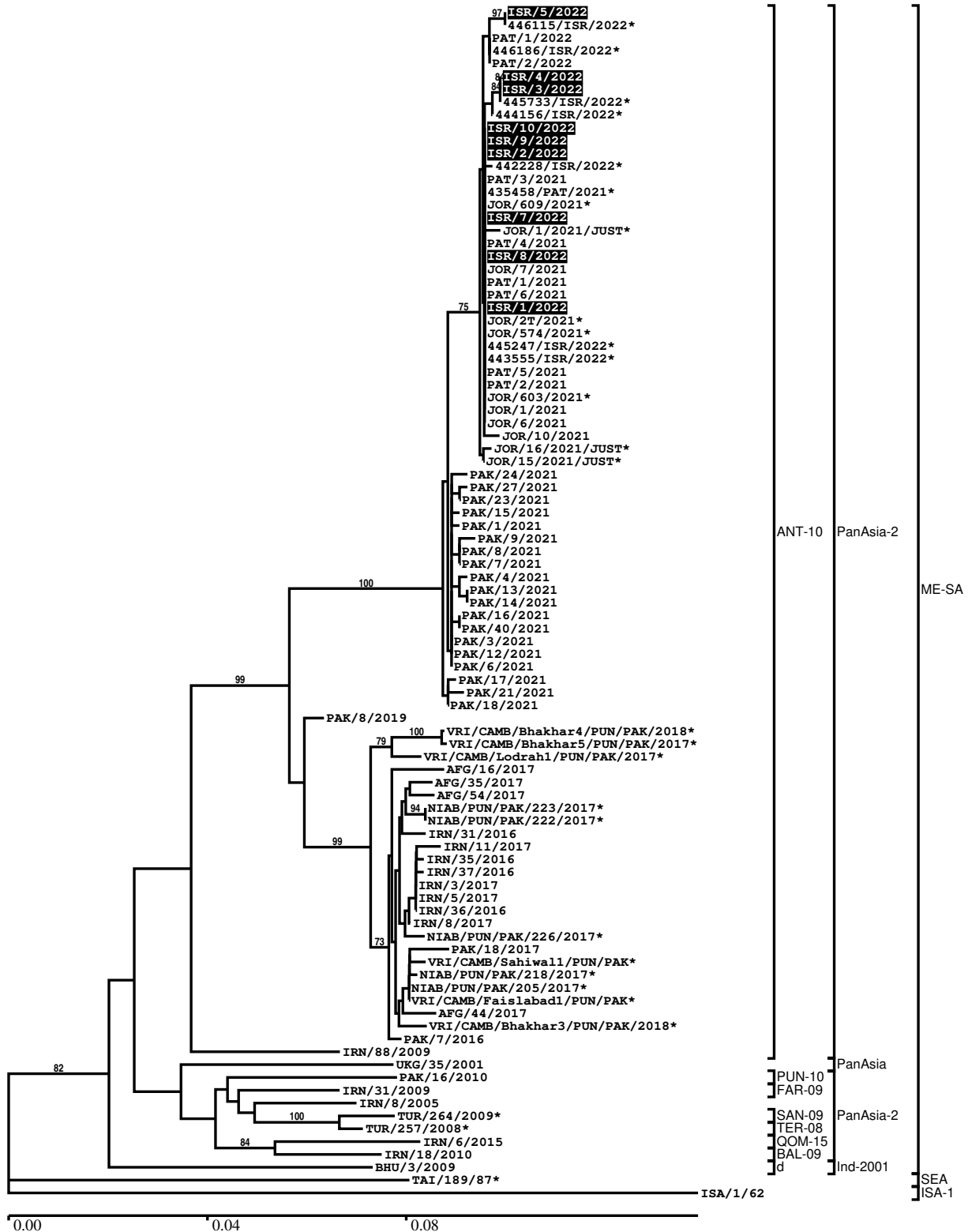
### Most Closely Related Prototype Sequences

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		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	89.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	89.1	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_491	TUR/257/2008		88.9	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		88.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	88.3	0	O	ME-SA	PanAsia-2	QOM-15

Report on FMDV O in Israel in 2022

Batch: WRLFMD/2022/000011



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2022/000011-Israel-O (9 sequences)
Sequence database set:	allseqs_O (5597 sequences)
Prototype sequence set:	!prototypes_O (49 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	636
Phylogeny reconstruction method:	fdnadist, fneighbor
Number of bootstrap samples:	1000
Random seed for bootstrapping:	1
Displaying bootstrap values above:	70.0%
Number of sequences in tree capped at:	100
Number of prototype sequences in tree:	10
VIBASys version:	reflabs-1.1.2

## Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
ISR/5/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
446115/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
PAT/1/2022	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
PAT/2/2022	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
ISR/4/2022	n/a	cattle	WRLFMD	Israel	ME-SA/PanAsia-2/ANT-10
ISR/3/2022	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
444156/ISR/2022*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/ANT-10
ISR/10/2022	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
ISR/2/2022	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
PAT/3/2021	n/a	sheep	WRLFMD	Palestinian AT	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
ISR/7/2022	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
PAT/4/2021	n/a	sheep	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10

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label	accession	host(s)	lab	country	taxonomic information
ISR/8/2022	n/a	cattle	WRLFMD	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
PAT/6/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
ISR/1/2022	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
JOR/574/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
445247/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
PAT/5/2021	n/a	goat	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
PAT/2/2021	n/a	cattle	WRLFMD	Palestinian AT	ME-SA/PanAsia-2/ANT-10
JOR/603/2021*	n/a	cattle	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/1/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/6/2021	n/a	cattle	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/10/2021	n/a	sheep	WRLFMD	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/16/2021/JUST*	n/a	sheep	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
JOR/15/2021/JUST*	n/a	sheep	JUST	Jordan	ME-SA/PanAsia-2/ANT-10
PAK/24/2021	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/15/2021	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
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/4/2021	n/a	water buffalo	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/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/3/2021	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/6/2021	n/a	cattle	WRLFMD	Pakistan	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

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label	accession	host(s)	lab	country	taxonomic information
PAK/18/2021	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/8/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar4/PUN/PAK/2018*	MK342187	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar5/PUN/PAK/2017*	MK342188	water buffalo	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah1/PUN/PAK/2017*	MK342179	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/35/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/54/2017	n/a	bovine	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
IRN/11/2017	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/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/5/2017	n/a	cattle	WRLFMD	Iran	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
NIAB/PUN/PAK/226/2017*	MH085208	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/18/2017	n/a	cattle	WRLFMD	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/Faislabad1/PUN/PAK*	MK292142	cattle	VRI-CAMB	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
PAK/7/2016	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
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/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
IRN/6/2015	MN276044	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15

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label	accession	host(s)	lab	country	taxonomic information
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
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