



FMD Genotyping Report

Lab Reference WRL batch Number: WRLMEG/2022/00017

Sender Details: Jamaliah Senawi, Malaysian National Foot-and-Mouth Disease Laboratory (MNFMDL), EMAIL - senawij@gmail.com

Date Received: 11/06/2022

Country of Origin*: MALAYSIA

Work has now been completed in respect of the sequences recently submitted and the details are as attached. Please note that all of our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:

Date: 15/06/22

Official Stamp:

DR CARRIE BATTEN
HEAD: Non-Vesicular
Disease Reference Laboratory
The Pirbright Institute
GU24 0NF, UK

c.c.: L Bakkali-Kassimi, D King, M Henstock, H Hicks, N Knowles, A Ludi, N Mapitse, S Metwally, V Mioulet, J Pinto, K Sumption, J Wadsworth, B Wood, FAO Circulation, OIE Animal Health Information, Regional OIE Delegate.

To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratory by email (reflabsfeedback@pirbright.ac.uk).

* Data supplied by the customer

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

Genotyping Report

FMDV serotype: O
Country: Malaysia
Year: 2021, 2022
Batch: WRLMEG/2022/00017
No. of sequences: 14
Report date: 13th June 2022
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth

This report has been prepared on behalf of the Malaysian National Foot-and-Mouth Disease Laboratory (MNFMDL) and covers VP1 sequences submitted to the WRLFMD on 11/06/2022.



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

email: reporting@pirbright.ac.uk

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Virus sample name:	MAY/99/2021(1)
Sender reference:	99-2021-1
Location of origin:	Kampung Pata Gunung, Pedah, Jerantut, Pahang
Country of origin:	Malaysia
Date of collection:	22/01/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50840, genome 50841, sequence viba_50842, sequencing info 50843	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48041	MAY/3041/2020(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48057	MAY/3696/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48053	MAY/3455/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48089	MAY/4390/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50886	MAY/742/2022(3)	goat	99.8	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.7	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.8	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.0	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.7	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.9	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	87.9	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		87.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		87.2	0	O	ME-SA		

Virus sample name:	MAY/1282/2021(1)
Sender reference:	1282-2021-1
Location of origin:	No 16, Batu 20, Kampung Pasir, Sg Tiram, Johor Bahru, Johor
Country of origin:	Malaysia
Date of collection:	23/05/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50844, genome 50845, sequence viba_50846, sequencing info 50847

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50858	MAY/1299/2021	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50854	MAY/1283/2021(3)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50850	MAY/1282/2021(2)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50862	MAY/1300/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_37165	MAY/2/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37173	MAY/4/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37169	MAY/3/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37161	MAY/1/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_42444	MYA/Sag/7/2017	cattle	93.5	0	O	ME-SA	Ind-2001	e
viba_37177	MAY/1/2018	cattle	93.5	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	92.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	88.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	88.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	86.8	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	86.6	0	O	ME-SA	PanAsia	
viba_617	IND/53/79	bovine	86.1	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.5	0	O	ME-SA		
viba_719	IRN/88/2009		85.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	85.2	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	MAY/1282/2021(2)
Sender reference:	1282-2021-2
Location of origin:	No 16, Batu 20, Kampung Pasir, Sg Tiram, Johor Bahru, Johor
Country of origin:	Malaysia
Date of collection:	23/05/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50848, genome 50849, sequence viba_50850, sequencing info 50851

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50858	MAY/1299/2021	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50846	MAY/1282/2021(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50854	MAY/1283/2021(3)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50862	MAY/1300/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_37165	MAY/2/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37173	MAY/4/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37169	MAY/3/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37161	MAY/1/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_42444	MYA/Sag/7/2017	cattle	93.5	0	O	ME-SA	Ind-2001	e
viba_37177	MAY/1/2018	cattle	93.5	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	92.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	88.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	88.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	86.8	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	86.6	0	O	ME-SA	PanAsia	
viba_617	IND/53/79	bovine	86.1	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.5	0	O	ME-SA		
viba_719	IRN/88/2009		85.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	85.2	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	MAY/1283/2021(3)
Sender reference:	1283-2021-3
Location of origin:	No 18, Bt 20, Jalan Sungai Tiram, Johor Bahru, Johor
Country of origin:	Malaysia
Date of collection:	23/05/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50852, genome 50853, sequence viba_50854, sequencing info 50855	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50858	MAY/1299/2021	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50846	MAY/1282/2021(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50850	MAY/1282/2021(2)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50862	MAY/1300/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_37165	MAY/2/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37173	MAY/4/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37169	MAY/3/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37161	MAY/1/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_42444	MYA/Sag/7/2017	cattle	93.5	0	O	ME-SA	Ind-2001	e
viba_37177	MAY/1/2018	cattle	93.5	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	92.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	88.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	88.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	86.8	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	86.6	0	O	ME-SA	PanAsia	
viba_617	IND/53/79	bovine	86.1	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.5	0	O	ME-SA		
viba_719	IRN/88/2009		85.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	85.2	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	MAY/1300/2021(1)
Sender reference:	1300-2021-1
Location of origin:	Ptd 804, Ulu Sg Tiram, Kg Pasir, Sg Hitam, Johor Bahru, Johor.
Country of origin:	Malaysia
Date of collection:	28/05/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50860, genome 50861, sequence viba_50862, sequencing info 50863

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50858	MAY/1299/2021	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50846	MAY/1282/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50854	MAY/1283/2021(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50850	MAY/1282/2021(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_37165	MAY/2/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_37173	MAY/4/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_37169	MAY/3/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_37161	MAY/1/2017	cattle	93.7	0	O	ME-SA	Ind-2001	e
viba_42444	MYA/Sag/7/2017	cattle	93.4	0	O	ME-SA	Ind-2001	e
viba_37177	MAY/1/2018	cattle	93.4	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	92.3	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	89.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	88.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	88.3	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	86.6	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	86.5	0	O	ME-SA	PanAsia	
viba_617	IND/53/79	bovine	86.0	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.3	0	O	ME-SA		
viba_719	IRN/88/2009		85.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	85.0	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	MAY/1576/2021(3)
Sender reference:	1576-2021-3
Location of origin:	134, B, Felda Bukit Besar, Ulu Sungai, Kota Tinggi, Johor
Country of origin:	Malaysia
Date of collection:	28/07/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50864, genome 50865, sequence viba_50866, sequencing info 50867	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50874	MAY/1577/2021(6)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50870	MAY/1577/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50766	TAI/30/21	bovine	98.3	0	O	ME-SA	Ind-2001	e
viba_50625	PVT-S234/ISA/2022	cattle	96.5	0	O	ME-SA	Ind-2001	e
viba_50504	VL6-J-T/ISA/2022		96.5	0	O	ME-SA	Ind-2001	e
viba_50631	PVT-S2AN/ISA/2022	cattle	96.5	0	O	ME-SA	Ind-2001	e
viba_50613	PVT-SP4/ISA/2022	cattle	96.5	0	O	ME-SA	Ind-2001	e
viba_50617	PVT-SP10/ISA/2022	cattle	96.2	0	O	ME-SA	Ind-2001	e
viba_37025	XJ/CHA/2017	cattle	95.6	0	O	ME-SA	Ind-2001	e
viba_32124	XJBC/CHA/2017		95.6	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.1	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	91.6	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.1	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.4	0	O	ME-SA	Ind-2001	c
viba_359	Manisa/TUR/69		88.3	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	88.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	88.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	88.0	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.7	0	O	ME-SA	PanAsia	

Virus sample name:	MAY/1577/2021(1)
Sender reference:	1577-2021-1
Location of origin:	Lot 448, Kg Rantau Panjang, Ulu Sungai, Kota Tinggi, Johor
Country of origin:	Malaysia
Date of collection:	28/07/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50868, genome 50869, sequence viba_50870, sequencing info 50871

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50874	MAY/1577/2021(6)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50866	MAY/1576/2021(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50766	TAI/30/21	bovine	98.4	0	O	ME-SA	Ind-2001	e
viba_50625	PVT-S234/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50504	VL6-J-T/ISA/2022		96.7	0	O	ME-SA	Ind-2001	e
viba_50631	PVT-S2AN/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50613	PVT-SP4/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50617	PVT-SP10/ISA/2022	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_37025	XJ/CHA/2017	cattle	95.7	0	O	ME-SA	Ind-2001	e
viba_32124	XJBC/CHA/2017		95.7	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.3	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	91.8	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.6	0	O	ME-SA	Ind-2001	c
viba_359	Manisa/TUR/69		88.5	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	88.2	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.9	0	O	ME-SA	PanAsia	

Virus sample name:	MAY/1577/2021(6)
Sender reference:	1577-2021-6
Location of origin:	Lot 448, Kg Rantau Panjang, Ulu Sungai, Kota Tinggi, Johor
Country of origin:	Malaysia
Date of collection:	28/07/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50872, genome 50873, sequence viba_50874, sequencing info 50875	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50870	MAY/1577/2021(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50866	MAY/1576/2021(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50766	TAI/30/21	bovine	98.4	0	O	ME-SA	Ind-2001	e
viba_50625	PVT-S234/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50504	VL6-J-T/ISA/2022		96.7	0	O	ME-SA	Ind-2001	e
viba_50631	PVT-S2AN/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50613	PVT-SP4/ISA/2022	cattle	96.7	0	O	ME-SA	Ind-2001	e
viba_50617	PVT-SP10/ISA/2022	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_37025	XJ/CHA/2017	cattle	95.7	0	O	ME-SA	Ind-2001	e
viba_32124	XJBC/CHA/2017		95.7	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.3	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	91.8	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.6	0	O	ME-SA	Ind-2001	c
viba_359	Manisa/TUR/69		88.5	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	88.2	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.9	0	O	ME-SA	PanAsia	

Virus sample name:	MAY/691/2022(5)
Sender reference:	691-2022-5
Location of origin:	Mlo 5628, Batu 37 Jln Johor, Bukit Batu, Kluang, Johor
Country of origin:	Malaysia
Date of collection:	29/03/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50880, genome 50881, sequence viba_50882, sequencing info 50883	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50878	MAY/497/2022	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_50758	TAI/4/21	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_50754	TAI/6/21	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_47295	LAO/4/2020	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_48105	MAY/877/2021(3)	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_44983	VIT/27/2019	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_47316	TAI/4/2020	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_48113	MAY/877/2021(6)	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_45022	VIT/7/2020	porcine	98.1	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.3	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	92.9	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.7	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	89.8	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.3	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_359	Manisa/TUR/69		88.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	88.1	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		87.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_860	IRN/6/2015	cattle	87.1	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	MAY/742/2022(3)
Sender reference:	742-2022-3
Location of origin:	T1 239, Kg Sri Jambi Pakat, Sg. Kluang, Batu Pahat, Johor
Country of origin:	Malaysia
Date of collection:	30/03/2022
Host species:	goat
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50884, genome 50885, sequence viba_50886, sequencing info 50887

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50890	MAY/742/2022(5)	goat	100.0	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50842	MAY/99/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48057	MAY/3696/2020(1)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48053	MAY/3455/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.6	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	94.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.2	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.1	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.7	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		87.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		87.4	0	O	ME-SA		

Virus sample name:	MAY/742/2022(5)
Sender reference:	742-2022-5
Location of origin:	Tl 239, Kg Sri Jambi Pakat, Sg. Kluang, Batu Pahat, Johor
Country of origin:	Malaysia
Date of collection:	30/03/2022
Host species:	goat
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50888, genome 50889, sequence viba_50890, sequencing info 50891	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50886	MAY/742/2022(3)	goat	100.0	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50842	MAY/99/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48057	MAY/3696/2020(1)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48053	MAY/3455/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.6	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	94.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.2	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.1	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.7	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		87.7	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		87.4	0	O	ME-SA		

Virus sample name:	MAY/49/2021
Sender reference:	49-2021
Location of origin:	Kg. Tanjung Sena Ulu, Tanjung Kling, Rembau, Negeri Sembilan
Country of origin:	Malaysia
Date of collection:	08/01/2021
Host species:	water buffalo
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022

VIBASys IDs: sample 50836, genome 50837, sequence viba_50838, sequencing info 50839

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48065	MAY/3966/2020	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_50842	MAY/99/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48057	MAY/3696/2020(1)	cattle	99.7	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	95.6	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.7	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.9	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.5	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.7	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	87.7	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.5	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		87.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_860	IRN/6/2015	cattle	87.0	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	MAY/1299/2021
Sender reference:	1299-2021
Location of origin:	Batu 20, Kg Pasir, Ulu Tiram, Johor Bahru, Johor
Country of origin:	Malaysia
Date of collection:	27/05/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50856, genome 50857, sequence viba_50858, sequencing info 50859	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50846	MAY/1282/2021(1)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50854	MAY/1283/2021(3)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50850	MAY/1282/2021(2)	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_50862	MAY/1300/2021(1)	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_37165	MAY/2/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37173	MAY/4/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37169	MAY/3/2017	cattle	94.0	0	O	ME-SA	Ind-2001	e
viba_37161	MAY/1/2017	cattle	93.8	0	O	ME-SA	Ind-2001	e
viba_42444	MYA/Sag/7/2017	cattle	93.5	0	O	ME-SA	Ind-2001	e
viba_37177	MAY/1/2018	cattle	93.5	0	O	ME-SA	Ind-2001	e

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_30238	MUR/19/2016	cattle	92.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	89.1	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	88.5	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	88.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	86.8	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	86.6	0	O	ME-SA	PanAsia	
viba_617	IND/53/79	bovine	86.1	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.5	0	O	ME-SA		
viba_719	IRN/88/2009		85.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	85.2	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	MAY/497/2022
Sender reference:	497-2022
Location of origin:	No. 3, Blok J, Felda Palong 7, Palong, Rompin, Jempol, Negeri Sembilan
Country of origin:	Malaysia
Date of collection:	14/03/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
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:	12/06/2022
Last updated:	12/06/2022
VIBASys IDs: sample 50876, genome 50877, sequence viba_50878, sequencing info 50879	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50882	MAY/691/2022(5)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_50758	TAI/4/21	bovine	98.9	0	O	ME-SA	Ind-2001	e
viba_50754	TAI/6/21	bovine	98.9	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		98.6	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	98.6	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	98.6	0	O	ME-SA	Ind-2001	e
viba_48170	VIT/23/2020	cattle	98.6	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	98.6	0	O	ME-SA	Ind-2001	e
viba_48174	VIT/24/2020	cattle	98.4	0	O	ME-SA	Ind-2001	e
viba_48162	VIT/21/2020	water buffalo	98.4	0	O	ME-SA	Ind-2001	e

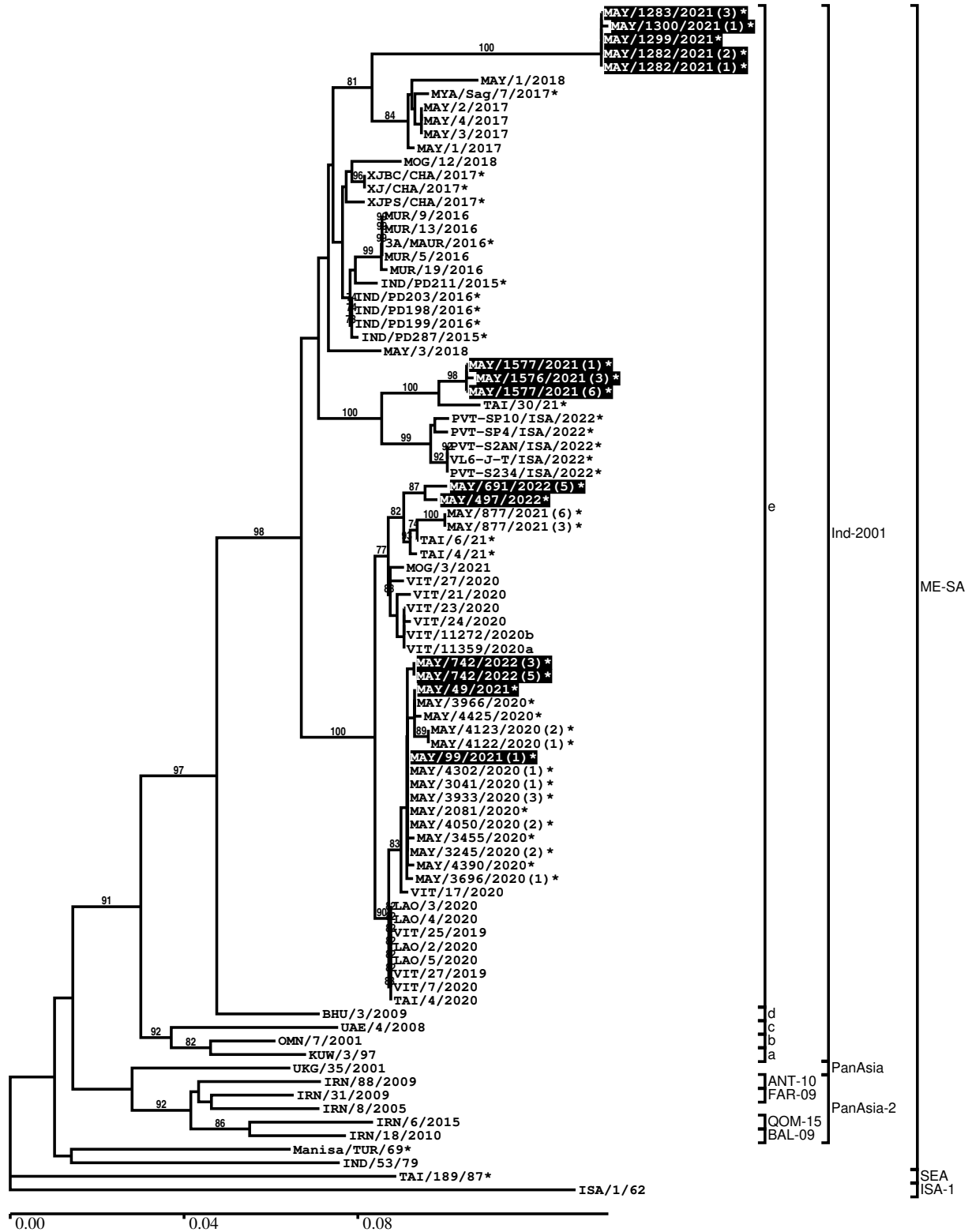
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30238	MUR/19/2016	cattle	95.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.9	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	89.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.3	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		88.2	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	88.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		87.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.3	0	O	ME-SA	PanAsia-2	

Report on FMDV O in Malaysia in 2021, 2022

Batch: WRLMEG/2022/00017



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor: vp1_O
 Query sequence set: WRLMEG/2022/00017-Malaysia-O (14 sequences)
 Sequence database set: allseqs_O (5618 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: 13
 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
MAY/1283/2021(3)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1300/2021(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1299/2021*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1282/2021(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1282/2021(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1/2018	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MYA/Sag/7/2017*	LC439253	cattle	NIAH-Japan	Myanmar	ME-SA/Ind-2001/e
MAY/2/2017	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MAY/4/2017	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MAY/3/2017	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MAY/1/2017	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MOG/12/2018	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
XJBC/CHA/2017*	KY696708	n/a	LVRI	China	ME-SA/Ind-2001/e
XJ/CHA/2017*	MF461724	cattle	LVRI	China	ME-SA/Ind-2001/e
XJPS/CHA/2017*	KY696707	n/a	LVRI	China	ME-SA/Ind-2001/e
MUR/9/2016	MG972501	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/13/2016	MG972504	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
3A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/5/2016	MG972497	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
IND/PD211/2015*	MT909645	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD203/2016*	MT909674	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD198/2016*	MT909672	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD199/2016*	MT909673	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD287/2015*	MT909659	cattle	PD-FMD	India	ME-SA/Ind-2001/e
MAY/3/2018	n/a	cattle	WRLFMD	Malaysia	ME-SA/Ind-2001/e
MAY/1577/2021(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1576/2021(3)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1577/2021(6)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
TAI/30/21*	n/a	bovine	TRRL	Thailand	ME-SA/Ind-2001/e
PVT-SP10/ISA/2022*	n/a	cattle	Pusvetma	Indonesia	ME-SA/Ind-2001/e
PVT-SP4/ISA/2022*	n/a	cattle	Pusvetma	Indonesia	ME-SA/Ind-2001/e
PVT-S2AN/ISA/2022*	n/a	cattle	Pusvetma	Indonesia	ME-SA/Ind-2001/e
VL6-J-T/ISA/2022*	n/a	n/a	Pusvetma	Indonesia	ME-SA/Ind-2001/e
PVT-S234/ISA/2022*	n/a	cattle	Pusvetma	Indonesia	ME-SA/Ind-2001/e
MAY/691/2022(5)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e

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label	accession	host(s)	lab	country	taxonomic information
MAY/497/2022*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/877/2021(6)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/877/2021(3)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
TAI/6/21*	n/a	bovine	TRRL	Thailand	ME-SA/Ind-2001/e
TAI/4/21*	n/a	bovine	TRRL	Thailand	ME-SA/Ind-2001/e
MOG/3/2021	n/a	n/a	WRLFMD	Mongolia	ME-SA/Ind-2001/e
VIT/27/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/21/2020	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/23/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/24/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/11272/2020b	n/a	porcine	RAHO6	Vietnam	ME-SA/Ind-2001/e
VIT/11359/2020a	n/a	cattle	RAHO6	Vietnam	ME-SA/Ind-2001/e
MAY/742/2022(3)*	n/a	goat	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/742/2022(5)*	n/a	goat	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/49/2021*	n/a	water buffalo	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3966/2020*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4425/2020*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4123/2020(2)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4122/2020(1)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/99/2021(1)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4302/2020(1)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3041/2020(1)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3933/2020(3)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/2081/2020*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4050/2020(2)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3455/2020*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3245/2020(2)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/4390/2020*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
MAY/3696/2020(1)*	n/a	cattle	MNFM DL	Malaysia	ME-SA/Ind-2001/e
VIT/17/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/3/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
LAO/4/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/25/2019	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/2/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
LAO/5/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/27/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/7/2020	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
TAI/4/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
UAE/4/2008	KM921876	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/c
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-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
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
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
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