

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

Genotyping Report

FMDV serotype: O
Country: Vietnam
Year: 2018, 2020, 2021
Batch: WRLFMD/2021/00007
No. of sequences: 16
Report date: 2nd July 2021
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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Virus sample name:	VIT/47/2018
Sender reference:	18-26376
Location of origin:	Phu-An, Cai Lay, Tien Giang
Country of origin:	Vietnam
Date of collection:	22/11/2018
Host species:	porcine
Serotype:	O
Topotype:	SEA
Lineage:	Mya-98
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48132, genome 48133, sequence viba_48134, sequencing info 48135	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_44085	VN35/2019		100.0	0	O	SEA	Mya-98	
viba_40688	VIT/34/2018	porcine	100.0	0	O	SEA	Mya-98	
viba_44963	VIT/15/2019	porcine	100.0	0	O	SEA	Mya-98	
viba_37715	VN 18-27160	porcine	100.0	0	O	SEA	Mya-98	
viba_40740	VIT/3/2019	porcine	100.0	0	O	SEA	Mya-98	
viba_44061	VN12/2018		100.0	0	O	SEA	Mya-98	
viba_40668	VIT/29/2018	porcine	100.0	0	O	SEA	Mya-98	
viba_40760	VIT/11/2019	porcine	100.0	0	O	SEA	Mya-98	
viba_40648	VIT/24/2018	porcine	100.0	0	O	SEA	Mya-98	
viba_40756	VIT/10/2019	porcine	100.0	0	O	SEA	Mya-98	

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_199	MYA/7/98	bovine	90.4	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	87.2	0	O	SEA		
viba_766	IRN/31/2009	cattle	84.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	84.2	0	O	ME-SA	PanAsia-2	BAL-09
viba_354	PAK/16/2010	cattle	84.1	0	O	ME-SA	PanAsia-2	PUN-10
viba_850	NEP/1/2015	cattle	84.1	1	O	ME-SA	PanAsia-2	KAT-15
viba_576	IND/R2/75		83.7	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_523	K83/79		83.7	0	O	EA-1		
viba_650	IRN/8/2005	ovine	83.6	0	O	ME-SA	PanAsia-2	

Virus sample name:	VIT/15/2020
Sender reference:	21-850/20-200
Location of origin:	Dap Thanh, Ba Che, Quang Ninh
Country of origin:	Vietnam
Date of collection:	03/02/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48136, genome 48137, sequence viba_48138, sequencing info 48139

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_44979	VIT/25/2019	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_47295	LAO/4/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47287	LAO/2/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_45022	VIT/7/2020	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_48005	MAY/35/2020(2)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47316	TAI/4/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_44983	VIT/27/2019	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	95.7	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	90.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.9	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
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:	VIT/16/2020
Sender reference:	21-850/20-1527
Location of origin:	Lang Hieu, Trung Khanh, Cao Bang
Country of origin:	Vietnam
Date of collection:	15/07/2020
Host species:	water buffalo
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48140, genome 48141, sequence viba_48142, sequencing info 48143

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48146	VIT/17/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	99.2	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	99.2	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	96.1	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	91.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.0	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	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		87.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	87.4	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	87.4	0	O	ME-SA	PanAsia-2	

Virus sample name:	VIT/17/2020
Sender reference:	20-9259A
Location of origin:	Binh Son, Long Thanh, Dong Nai
Country of origin:	Vietnam
Date of collection:	07/08/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48144, genome 48145, sequence viba_48146, sequencing info 48147

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48041	MAY/3041/2020(1)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	99.5	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	99.5	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	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	89.6	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:	VIT/18/2020
Sender reference:	20-10258
Location of origin:	Phu Nghia, Bu Gia map, Binh Phuoc
Country of origin:	Vietnam
Date of collection:	15/09/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48148, genome 48149, sequence viba_48150, sequencing info 48151	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48146	VIT/17/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48069	MAY/3933/2020(3)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48045	MAY/3245/2020(2)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48142	VIT/16/2020	water buffalo	99.2	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	99.1	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.1	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	95.6	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.4	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	89.4	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	88.2	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		87.7	0	O	ME-SA		
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	

Virus sample name:	VIT/19/2020
Sender reference:	21-956/20CD-5140
Location of origin:	Nghia Khanh, Nghia Dan, Nghe An
Country of origin:	Vietnam
Date of collection:	06/10/2020
Host species:	
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48152, genome 48153, sequence viba_48154, sequencing info 48155

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47389	VIT/11272/2020a	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_48158	VIT/20/2020	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_47401	VIT/11359/2020b	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48178	VIT/25/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48033	MAY/1388/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48146	VIT/17/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_47904	MAY/563/21(2)	cattle	99.4	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	95.7	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.5	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	89.6	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	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	87.9	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		87.5	0	O	ME-SA		
viba_719	IRN/88/2009		87.4	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	VIT/20/2020
Sender reference:	20-11272
Location of origin:	TX Go Cong, Tien Giang
Country of origin:	Vietnam
Date of collection:	27/10/2020
Host species:	porcine
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48156, genome 48157, sequence viba_48158, sequencing info 48159	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47389	VIT/11272/2020a	porcine	100.0	0	O	ME-SA	Ind-2001	e
viba_47401	VIT/11359/2020b	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48178	VIT/25/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_47904	MAY/563/21(2)	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48154	VIT/19/2020		99.7	0	O	ME-SA	Ind-2001	e
viba_48166	VIT/22/2020	porcine	99.5	0	O	ME-SA	Ind-2001	e
viba_48033	MAY/1388/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48146	VIT/17/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.4	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	93.5	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	90.4	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	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.6	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		87.5	0	O	ME-SA		
viba_719	IRN/88/2009		87.1	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	VIT/21/2020
Sender reference:	21-850/20-2868
Location of origin:	Van Thu, Chi Lang, Lang Son
Country of origin:	Vietnam
Date of collection:	29/10/2020
Host species:	water buffalo
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48160, genome 48161, sequence viba_48162, sequencing info 48163

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48170	VIT/23/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	99.5	0	O	ME-SA	Ind-2001	e
viba_48174	VIT/24/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48190	VIT/28/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	98.9	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	98.9	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	93.2	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	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_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.0	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69	cattle	87.7	0	O	ME-SA		

Virus sample name:	VIT/22/2020
Sender reference:	20-11382
Location of origin:	Con Dao, Ba Ria-Vung Tau
Country of origin:	Vietnam
Date of collection:	02/11/2020
Host species:	porcine
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48164, genome 48165, sequence viba_48166, sequencing info 48167

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47389	VIT/11272/2020a	porcine	99.5	0	O	ME-SA	Ind-2001	e
viba_48158	VIT/20/2020	porcine	99.5	0	O	ME-SA	Ind-2001	e
viba_47401	VIT/11359/2020b	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48178	VIT/25/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48033	MAY/1388/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_47904	MAY/563/21(2)	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48154	VIT/19/2020		99.2	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_48146	VIT/17/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	98.9	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	94.9	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.4	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.2	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	88.8	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	87.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.2	0	O	ME-SA	PanAsia-2	
viba_285	UKG/35/2001	porcine	87.1	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		87.0	0	O	ME-SA		
viba_719	IRN/88/2009		86.7	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	VIT/23/2020
Sender reference:	21-862/20-0189
Location of origin:	My Long Bac, Cau Ngang, Tra Vinh
Country of origin:	Vietnam
Date of collection:	05/11/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48168, genome 48169, sequence viba_48170, sequencing info 48171	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47397	VIT/11359/2020a	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	100.0	0	O	ME-SA	Ind-2001	e
viba_48174	VIT/24/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_48190	VIT/28/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48162	VIT/21/2020	water buffalo	99.5	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	99.1	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	99.1	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	95.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.4	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	90.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.6	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69	cattle	87.8	0	O	ME-SA		

Virus sample name:	VIT/24/2020
Sender reference:	21-862/20-0190
Location of origin:	Vinh Kim, Cau Ngang, Tra Vinh
Country of origin:	Vietnam
Date of collection:	05/11/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48172, genome 48173, sequence viba_48174, sequencing info 48175

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48170	VIT/23/2020	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	99.8	0	O	ME-SA	Ind-2001	e
viba_48190	VIT/28/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48162	VIT/21/2020	water buffalo	99.4	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	98.9	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	98.9	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	93.2	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	90.1	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	88.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.3	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69	cattle	88.0	0	O	ME-SA		

Virus sample name:	VIT/25/2020
Sender reference:	20-11542/1
Location of origin:	Duc Tan, Tan Tru, Long An
Country of origin:	Vietnam
Date of collection:	06/11/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48176, genome 48177, sequence viba_48178, sequencing info 48179

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47389	VIT/11272/2020a	porcine	99.8	0	O	ME-SA	Ind-2001	e
viba_48158	VIT/20/2020	porcine	99.8	0	O	ME-SA	Ind-2001	e
viba_47401	VIT/11359/2020b	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_47904	MAY/563/21(2)	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48154	VIT/19/2020		99.5	0	O	ME-SA	Ind-2001	e
viba_48166	VIT/22/2020	porcine	99.4	0	O	ME-SA	Ind-2001	e
viba_48033	MAY/1388/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48146	VIT/17/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.2	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	93.4	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.5	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	89.1	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	87.4	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		87.4	0	O	ME-SA		
viba_719	IRN/88/2009		87.3	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	VIT/26/2020
Sender reference:	21-850/20-3196
Location of origin:	Chi Minh, Trang Dinh, Lang Son
Country of origin:	Vietnam
Date of collection:	21/11/2020
Host species:	water buffalo
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021

VIBASys IDs: sample 48180, genome 48181, sequence viba_48182, sequencing info 48183

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47283	LAO/1/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	98.9	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	98.9	0	O	ME-SA	Ind-2001	e
viba_47295	LAO/4/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_47308	TAI/2/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_47340	TAI/10/2020	cattle	98.9	0	O	ME-SA	Ind-2001	e
viba_44991	VIT/29/2019	water buffalo	98.9	0	O	ME-SA	Ind-2001	e
viba_47287	LAO/2/2020	cattle	98.9	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	93.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.2	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	89.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	87.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	87.2	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.1	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		87.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		87.0	0	O	ME-SA		

Virus sample name:	VIT/27/2020
Sender reference:	21-862/20-0231
Location of origin:	Ngai Xuyen, Tra Cu, Tra Vinh
Country of origin:	Vietnam
Date of collection:	15/12/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48184, genome 48185, sequence viba_48186, sequencing info 48187	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48170	VIT/23/2020	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	99.4	0	O	ME-SA	Ind-2001	e
viba_48162	VIT/21/2020	water buffalo	99.2	0	O	ME-SA	Ind-2001	e
viba_48174	VIT/24/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	99.1	0	O	ME-SA	Ind-2001	e
viba_47328	TAI/7/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	99.1	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	95.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.4	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	90.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.9	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009	cattle	88.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69	cattle	87.5	0	O	ME-SA		

Virus sample name:	VIT/28/2020
Sender reference:	21-862/20-0237
Location of origin:	Tan Son, Tra Cu, Tra Vinh
Country of origin:	Vietnam
Date of collection:	26/12/2020
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48188, genome 48189, sequence viba_48190, sequencing info 48191	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48170	VIT/23/2020	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47393	VIT/11272/2020b	porcine	99.7	0	O	ME-SA	Ind-2001	e
viba_48174	VIT/24/2020	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48162	VIT/21/2020	water buffalo	99.2	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	98.7	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_47299	LAO/5/2020	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_44967	VIT/17/2019	porcine	98.7	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	95.1	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	90.5	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_766	IRN/31/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.0	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009	cattle	88.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69	cattle	87.5	0	O	ME-SA		

Virus sample name:	VIT/1/2021
Sender reference:	21-850/21-107
Location of origin:	Hoang Mo, Binh Lieu, Quang Ninh
Country of origin:	Vietnam
Date of collection:	07/01/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/06/2021
Primers:	O-1C244F/EUR-2B52R, FMD-3161F/FMD-4303R
Received for sequencing:	28/06/2021
Created:	01/07/2021
Last updated:	01/07/2021
VIBASys IDs: sample 48192, genome 48193, sequence viba_48194, sequencing info 48195	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48033	MAY/1388/2020	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_48101	MAY/4425/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47389	VIT/11272/2020a	porcine	99.1	0	O	ME-SA	Ind-2001	e
viba_48146	VIT/17/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_48041	MAY/3041/2020(1)	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_48085	MAY/4302/2020(1)	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_48158	VIT/20/2020	porcine	99.1	0	O	ME-SA	Ind-2001	e
viba_48037	MAY/2081/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47283	LAO/1/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_48073	MAY/4050/2020(2)	cattle	99.1	0	O	ME-SA	Ind-2001	e

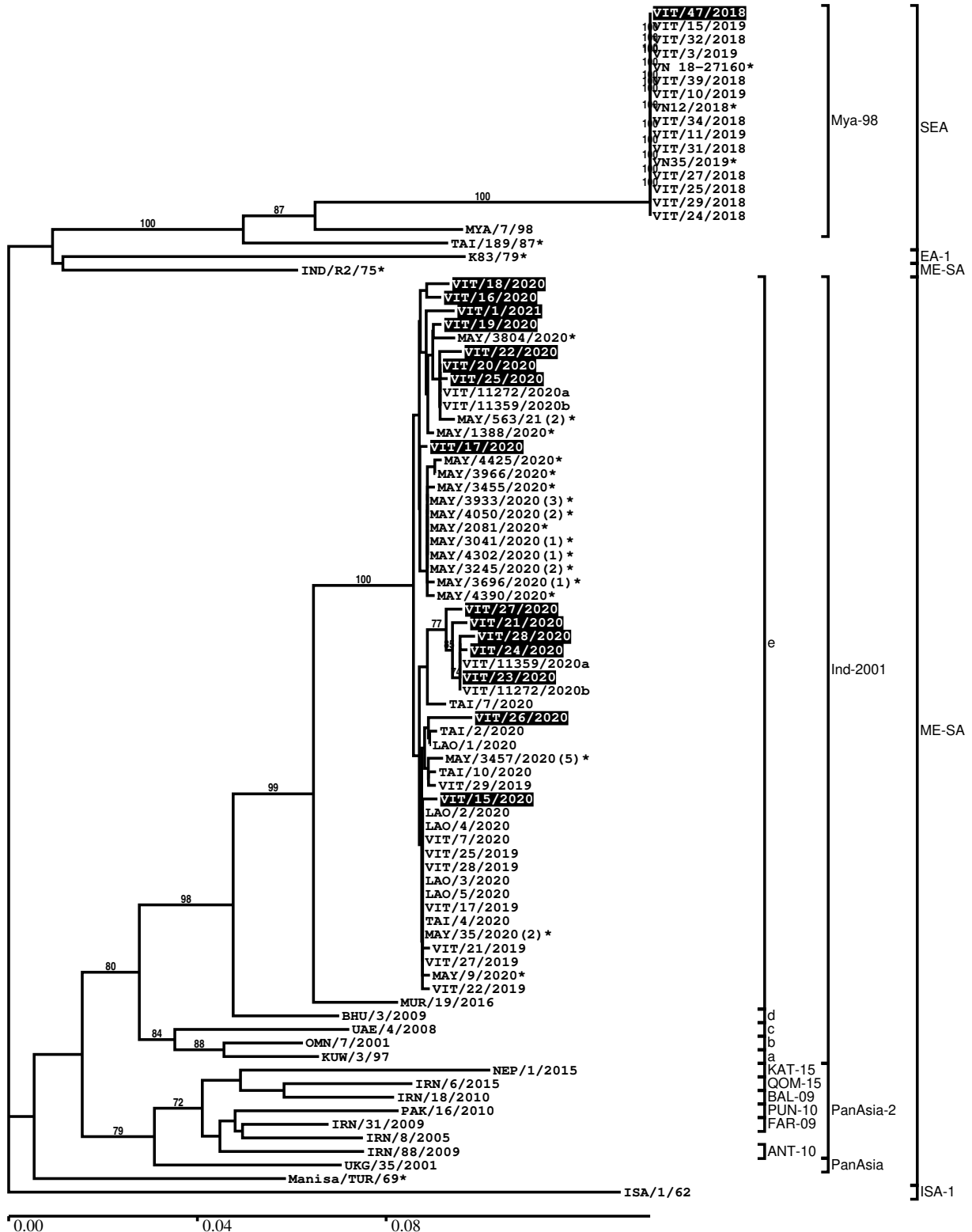
Most Closely Related Prototype Sequences

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	95.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	93.5	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	90.4	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	88.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	87.6	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.2	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69		86.9	0	O	ME-SA		
viba_860	IRN/6/2015	cattle	86.9	0	O	ME-SA	PanAsia-2	QOM-15

Report on FMDV O in Vietnam in 2018, 2020, 2021

Batch: WRLFMD/2021/00007



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2021/00007-Vietnam-O (16 sequences)
Sequence database set:	allseqs_O (5231 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:	18
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
VIT/47/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/15/2019	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/32/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/3/2019	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VN 18-27160*	n/a	porcine	RAHO6	Vietnam	SEA/Mya-98
VIT/39/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/10/2019	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VN12/2018*	n/a	n/a	APQA	Vietnam	SEA/Mya-98
VIT/34/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/11/2019	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/31/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VN35/2019*	n/a	n/a	APQA	Vietnam	SEA/Mya-98
VIT/27/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/25/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/29/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
VIT/24/2018	n/a	porcine	WRLFMD	Vietnam	SEA/Mya-98
MYA/7/98	DQ164925	bovine	WRLFMD	Myanmar	SEA/Mya-98
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
K83/79*	AJ303511	n/a	WRLFMD	Kenya	EA-1
IND/R2/75*	AF204276	n/a	PD-FMD	India	ME-SA
VIT/18/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/16/2020	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/1/2021	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/19/2020	n/a	n/a	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/3804/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
VIT/22/2020	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/20/2020	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/25/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/11272/2020a	n/a	porcine	RAHO6	Vietnam	ME-SA/Ind-2001/e
VIT/11359/2020b	n/a	cattle	RAHO6	Vietnam	ME-SA/Ind-2001/e
MAY/563/21(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/1388/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
VIT/17/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/4425/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/3966/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/3455/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e

continued on next page

label	accession	host(s)	lab	country	taxonomic information
MAY/3933/2020(3)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/4050/2020(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/2081/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/3041/2020(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/4302/2020(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/3245/2020(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/3696/2020(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/4390/2020*	n/a	cattle	MNFMDL	Malaysia	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/28/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/24/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/11359/2020a	n/a	cattle	RAHO6	Vietnam	ME-SA/Ind-2001/e
VIT/23/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/11272/2020b	n/a	porcine	RAHO6	Vietnam	ME-SA/Ind-2001/e
TAI/7/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
VIT/26/2020	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
TAI/2/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
LAO/1/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
MAY/3457/2020(5)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
TAI/10/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
VIT/29/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/15/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/2/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
LAO/4/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/7/2020	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/25/2019	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/28/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/3/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
LAO/5/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/17/2019	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
TAI/4/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
MAY/35/2020(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
VIT/21/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/27/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/9/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
VIT/22/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	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
NEP/1/2015	MN276045	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
IRN/6/2015	MN276044	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
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
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available