

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

Genotyping Report

FMDV serotype: O
Country: Mongolia
Year: 2021, 2022
Batch: WRLFMD/2022/000010
No. of sequences: 13
Report date: 13th July 2022
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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

email: reporting@pirbright.ac.uk

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Virus sample name:	MOG/17/2021
Sender reference:	MOG/FMD/22/01
Location of origin:	Must district, Khovd province
Country of origin:	Mongolia
Date of collection:	20/08/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	13/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51030, genome 51031, sequence viba_51032, sequencing info 51033

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51044	MOG/2/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48642	MOG/1/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_48646	MOG/2/2021		99.2	0	O	ME-SA	Ind-2001	e
viba_48654	MOG/4/2021		98.9	0	O	ME-SA	Ind-2001	e
viba_51036	MOG/18/2021	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_47993	MAY/9/2020	cattle	98.3	0	O	ME-SA	Ind-2001	e
viba_48009	MAY/127/2020	cattle	98.3	0	O	ME-SA	Ind-2001	e
viba_45022	VIT/7/2020	porcine	98.1	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	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	94.8	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	91.2	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.5	0	O	ME-SA	Ind-2001	a
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_397	UAE/4/2008	gazelle	88.6	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	87.4	0	O	ME-SA	PanAsia-2	BAL-09

Virus sample name:	MOG/18/2021
Sender reference:	MOG/FMD/22/05
Location of origin:	Burentogtokh district, Khuvsgul province
Country of origin:	Mongolia
Date of collection:	04/12/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2 & WRL-LFBK3
Harvest date of material:	16/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51034, genome 51035, sequence viba_51036, sequencing info 51037

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48642	MOG/1/2021		98.7	0	O	ME-SA	Ind-2001	e
viba_51032	MOG/17/2021	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_51044	MOG/2/2022	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_48646	MOG/2/2021		98.6	0	O	ME-SA	Ind-2001	e
viba_48654	MOG/4/2021		98.3	0	O	ME-SA	Ind-2001	e
viba_47993	MAY/9/2020	cattle	97.6	0	O	ME-SA	Ind-2001	e
viba_48009	MAY/127/2020	cattle	97.6	0	O	ME-SA	Ind-2001	e
viba_45022	VIT/7/2020	porcine	97.5	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	97.5	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	porcine	97.5	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	94.2	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	92.6	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.4	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.1	0	O	ME-SA	Ind-2001	a
viba_285	UKG/35/2001	porcine	87.9	0	O	ME-SA	PanAsia	
viba_397	UAE/4/2008	gazelle	87.9	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	87.8	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	87.2	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69		86.7	0	O	ME-SA		

Virus sample name:	MOG/19/2021
Sender reference:	MOG/FMD/22/07
Location of origin:	Zavkhan district, Uvs province
Country of origin:	Mongolia
Date of collection:	13/12/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	11/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51038, genome 51039, sequence viba_51040, sequencing info 51041

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51056	MOG/7/2022	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_51072	MOG/11/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.7	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	93.4	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	90.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.6	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/2/2022
Sender reference:	MOG/FMD/22/14
Location of origin:	Mandal-Ovoo district, Umnugovi province
Country of origin:	Mongolia
Date of collection:	13/01/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	13/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51042, genome 51043, sequence viba_51044, sequencing info 51045

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51032	MOG/17/2021	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_48642	MOG/1/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_48646	MOG/2/2021		99.2	0	O	ME-SA	Ind-2001	e
viba_48654	MOG/4/2021		98.9	0	O	ME-SA	Ind-2001	e
viba_51036	MOG/18/2021	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_47993	MAY/9/2020	cattle	98.3	0	O	ME-SA	Ind-2001	e
viba_48009	MAY/127/2020	cattle	98.3	0	O	ME-SA	Ind-2001	e
viba_45022	VIT/7/2020	porcine	98.1	0	O	ME-SA	Ind-2001	e
viba_47291	LAO/3/2020	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_44979	VIT/25/2019	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	94.8	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	91.2	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.5	0	O	ME-SA	Ind-2001	a
viba_285	UKG/35/2001	porcine	88.7	0	O	ME-SA	PanAsia	
viba_397	UAE/4/2008	gazelle	88.6	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	87.7	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	87.4	0	O	ME-SA	PanAsia-2	BAL-09

Virus sample name:	MOG/3/2022
Sender reference:	MOG/FMD/22/17
Location of origin:	Mandal-Ovoo district, Umnugovi province
Country of origin:	Mongolia
Date of collection:	13/01/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	14/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51046, genome 51047, sequence viba_51048, sequencing info 51049

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51072	MOG/11/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/6/2022
Sender reference:	MOG/FMD/22/11
Location of origin:	Gurvanbulag district, Bulgan province
Country of origin:	Mongolia
Date of collection:	24/01/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	16/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51050, genome 51051, sequence viba_51052, sequencing info 51053

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51072	MOG/11/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/7/2022
Sender reference:	MOG/FMD/22/09
Location of origin:	Khulunbair district, Dornod province
Country of origin:	Mongolia
Date of collection:	28/01/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	14/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51054, genome 51055, sequence viba_51056, sequencing info 51057

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51040	MOG/19/2021	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51072	MOG/11/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.5	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	93.2	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	90.1	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.4	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		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		87.4	0	O	ME-SA		

Virus sample name:	MOG/8/2022
Sender reference:	MOG/FMD/22/06
Location of origin:	Altantsugts district, Bayan-Ulgii province
Country of origin:	Mongolia
Date of collection:	02/02/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1 & WRL-LFBK2
Harvest date of material:	17/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022
VIBASys IDs: sample 51058, genome 51059, sequence viba_51060, sequencing info 51061	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51040	MOG/19/2021	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51072	MOG/11/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.5	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	93.2	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	90.1	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.4	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		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		87.4	0	O	ME-SA		

Virus sample name:	MOG/9/2022
Sender reference:	MOG/FMD/22/04
Location of origin:	Argalant district, Tuv province
Country of origin:	Mongolia
Date of collection:	08/02/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1 & WRL-LFBK2
Harvest date of material:	19/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51062, genome 51063, sequence viba_51064, sequencing info 51065

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51072	MOG/11/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/10/2022
Sender reference:	MOG/FMD/22/02
Location of origin:	Esunzuil district, Uvurkhangai province
Country of origin:	Mongolia
Date of collection:	11/02/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	16/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51066, genome 51067, sequence viba_51068, sequencing info 51069

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51072	MOG/11/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/11/2022
Sender reference:	MOG/FMD/22/15
Location of origin:	Bayan-Adarga district, Khentii province
Country of origin:	Mongolia
Date of collection:	18/02/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	16/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022
VIBASys IDs: sample 51070, genome 51071, sequence viba_51072, sequencing info 51073	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51064	MOG/9/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51076	MOG/12/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/12/2022
Sender reference:	MOG/FMD/22/16
Location of origin:	Chandmani district, Khovd province
Country of origin:	Mongolia
Date of collection:	25/02/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	18/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51074, genome 51075, sequence viba_51076, sequencing info 51077

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_51072	MOG/11/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51052	MOG/6/2022	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.5	0	O	ME-SA	Ind-2001	e
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	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	95.1	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	90.7	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	88.6	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		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		87.5	0	O	ME-SA		

Virus sample name:	MOG/13/2022
Sender reference:	MOG/FMD/22/13
Location of origin:	Mandal district, Selenge province
Country of origin:	Mongolia
Date of collection:	31/08/2022
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK2
Harvest date of material:	21/06/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	04/07/2022
Created:	13/07/2022
Last updated:	13/07/2022

VIBASys IDs: sample 51078, genome 51079, sequence viba_51080, sequencing info 51081

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_48650	MOG/3/2021		99.4	0	O	ME-SA	Ind-2001	e
viba_51040	MOG/19/2021	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_51056	MOG/7/2022	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_51060	MOG/8/2022	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_51072	MOG/11/2022	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_47397	VIT/11359/2020a	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_51064	MOG/9/2022	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_51068	MOG/10/2022	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_51048	MOG/3/2022	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_48186	VIT/27/2020	cattle	99.1	0	O	ME-SA	Ind-2001	e

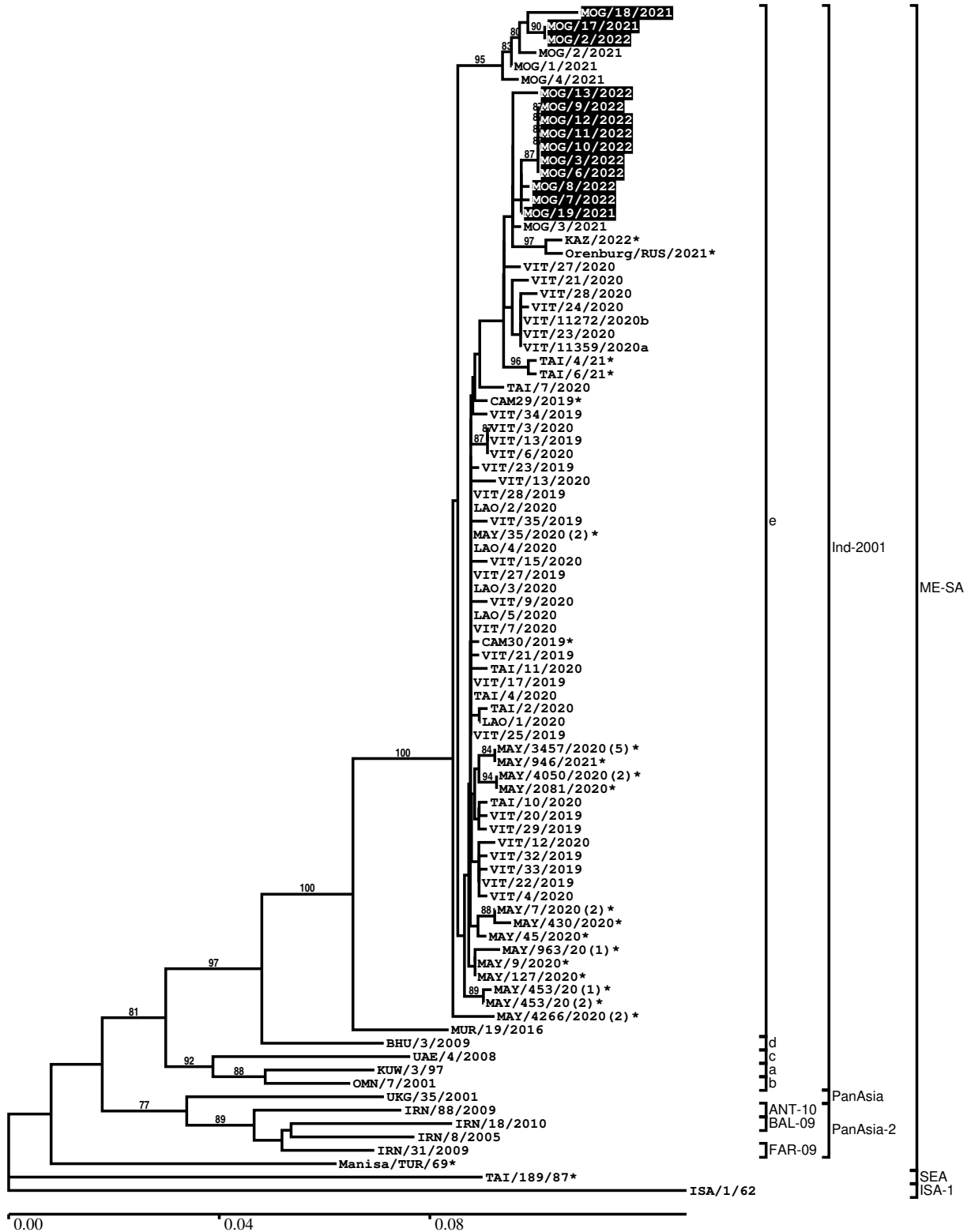
Most Closely Related Prototype Sequences

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	95.1	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	90.7	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_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		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		87.7	0	O	ME-SA		

Report on FMDV O in Mongolia in 2021, 2022

Batch: WRLFMD/2022/000010



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2022/000010-Mongolia-O (13 sequences)
Sequence database set:	allseqs_O (5649 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:	11
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
MOG/18/2021	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/17/2021	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/2/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/2/2021	n/a	n/a	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/1/2021	n/a	n/a	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/4/2021	n/a	n/a	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/13/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/9/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/12/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/11/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/10/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/3/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/6/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/8/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/7/2022	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/19/2021	n/a	cattle	WRLFMD	Mongolia	ME-SA/Ind-2001/e
MOG/3/2021	n/a	n/a	WRLFMD	Mongolia	ME-SA/Ind-2001/e
KAZ/2022*	n/a	cattle	ARRIAH	Kazakhstan	ME-SA/Ind-2001/e
Orenburg/RUS/2021*	n/a	cattle	ARRIAH	Russia	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/11272/2020b	n/a	porcine	RAHO6	Vietnam	ME-SA/Ind-2001/e
VIT/23/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/11359/2020a	n/a	cattle	RAHO6	Vietnam	ME-SA/Ind-2001/e
TAI/4/21*	n/a	bovine	TRRL	Thailand	ME-SA/Ind-2001/e
TAI/6/21*	n/a	bovine	TRRL	Thailand	ME-SA/Ind-2001/e
TAI/7/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
CAM29/2019*	MZ634455	cattle	APQA	Cambodia	ME-SA/Ind-2001/e
VIT/34/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/3/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/13/2019	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/6/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/23/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/13/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e

continued on next page

label	accession	host(s)	lab	country	taxonomic information
VIT/28/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/2/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/35/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/35/2020(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
LAO/4/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/15/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/27/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/3/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/9/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
LAO/5/2020	n/a	cattle	WRLFMD	Laos	ME-SA/Ind-2001/e
VIT/7/2020	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
CAM30/2019*	MZ634456	cattle	APQA	Cambodia	ME-SA/Ind-2001/e
VIT/21/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
TAI/11/2020	n/a	cattle	WRLFMD	Thailand	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
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
VIT/25/2019	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/3457/2020(5)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/946/2021*	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
TAI/10/2020	n/a	cattle	WRLFMD	Thailand	ME-SA/Ind-2001/e
VIT/20/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/29/2019	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/12/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/32/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/33/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/22/2019	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
VIT/4/2020	n/a	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
MAY/7/2020(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/430/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/45/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/963/20(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/9/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/127/2020*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/453/20(1)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/453/20(2)*	n/a	cattle	MNFMDL	Malaysia	ME-SA/Ind-2001/e
MAY/4266/2020(2)*	n/a	cattle	MNFMDL	Malaysia	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
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
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/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	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