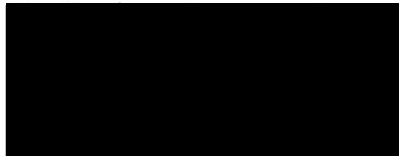




FMD Genotyping Reports (Version 2)

Lab Reference WRL batch Number: WRLFMD/2023/000070 & WRLFMD/2025/000014

Sender Details:



Date Received: 19/06/2025

Country of Origin*: Thailand

Attached are two previously circulated Thailand Genotyping reports with the Tai-87 lineage samples (O/TAI/16/2022 & O/TAI/11/2024) removed.

Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

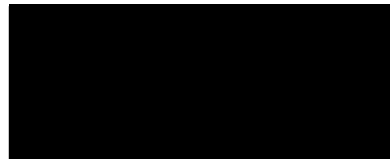
Results Approved By:



Date:

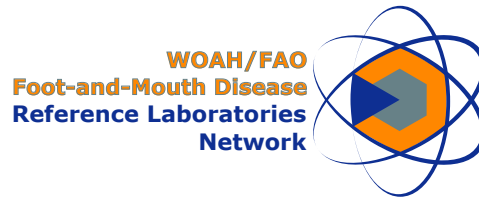
20/06/2025

Official Stamp:



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)

FMDV Genotyping Report v.2

Generated from: FMDtype | FMDV Genotyping Tool

Downloaded on: 14 October 2025

Citation: WRLFMD. 2025. FMDV Genotyping Report [WRLFMD/2023/000070]. (Accessed 14/10/25)

FMDV serotype: O

Country: Thailand

Year: 2022-2023

Batch: WRLFMD/2023/000070

No. of sequences: 16

Reported date: 14 October 2025

WRLFMD Website: <https://www.wrlfmd.org/>

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: TAI/4/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00085-0001 R3B4
Location of origin:	Sila Loi, Sam Roi Yot, Prachuap Khiri Khan, Western Region
Country of origin:	Thailand
Date of collection:	2022-08-11
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B4 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485478	TAI/6/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485490	TAI/19/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.05	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	98.89	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	98.89	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.63	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.26	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.38	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.75	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	87.70	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.54	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.36	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/5/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00092-0001 R3B2
Location of origin:	Lam Phaya Klang, Muak Lek, Saraburi, Central Region
Country of origin:	Thailand
Date of collection:	2022-08-17
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B2 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485480	TAI/8/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.37	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.94	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.69	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.75	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.70	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.36	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/6/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00093-0002 R3B6
Location of origin:	Chai Rat, Bang Saphan Noi, Prachuap Khiri Khan, Western Region
Country of origin:	Thailand
Date of collection:	2022-08-18
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B6 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485476	TAI/4/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485490	TAI/19/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.37	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.94	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.69	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.06	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.94	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.45	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.86	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/7/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00108-0001 R3B4
Location of origin:	Huai Sai, Mueang Prachuab Khiri Khan, Prachuap Khiri Khan, Western Region
Country of origin:	Thailand
Date of collection:	2022-08-26
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B4 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485480	TAI/8/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.53	1	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.21	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.79	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.42	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.54	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.59	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.78	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.47	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	87.86	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.38	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.20	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/8/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00114-0001 R2B3
Location of origin:	Chanthuek, Pak Chong, Nakhon Ratchasima, North eastern Region
Country of origin:	Thailand
Date of collection:	2022-09-05
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R2B3 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485477	TAI/5/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.84	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.53	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.10	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.73	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.85	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.90	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.10	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.78	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.29	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.17	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.70	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.52	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/9/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00115-0001 R1B3
Location of origin:	Ao Nang, Mueang Krabi, Krabi, Southern Region
Country of origin:	Thailand
Date of collection:	2022-09-05
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R1B3 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485483	TAI/11/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.26	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.89	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.01	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.06	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.94	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.45	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.86	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/10/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00120-0002 R3B3
Location of origin:	Sap Anan, Tha Sae, Chumphon, Southern Region
Country of origin:	Thailand
Date of collection:	2022-09-08
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485480	TAI/8/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.53	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.21	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.79	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.73	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.85	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.90	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.10	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.78	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	87.86	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.38	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.20	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/11/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00127-0001 R2B3
Location of origin:	Lam Phaya Klang, Muak Lek, Saraburi, Central Region
Country of origin:	Thailand
Date of collection:	2022-09-13
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R2B3 WRL-LFBK1
Material Harvest Date:	2023-09-08
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485481	TAI/9/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.26	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.89	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.01	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.06	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.94	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.45	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.86	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/12/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00139-0006 R3B1
Location of origin:	Nong Yang Suea, Muak Lek, Saraburi, Central Region
Country of origin:	Thailand
Date of collection:	2022-09-19
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B1 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485481	TAI/9/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	100.00	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.68	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.26	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.89	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.01	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.06	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.94	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.45	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.86	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/13/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00141-0003 R3B3
Location of origin:	Hin Lek Fai, Hua Hin, Prachuap Khiri Khan, Western Region
Country of origin:	Thailand
Date of collection:	2022-09-28
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	1

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485481	TAI/9/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.37	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.94	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.69	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.75	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.54	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.52	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/15/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00165-0001 R3B4
Location of origin:	Khok Tum, Mueang Lopburi, Lopburi, Central Region
Country of origin:	Thailand
Date of collection:	2022-10-06
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B4 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	1

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485480	TAI/8/2022	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.37	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.94	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.69	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.75	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.54	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.36	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/17/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00207-0002 R3B3
Location of origin:	Tha Maka, Tha Maka, Kanchanaburi, Western Region
Country of origin:	Thailand
Date of collection:	2022-10-28
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485481	TAI/9/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.21	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.21	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485491	TAI/20/2022	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.79	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.42	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.54	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.59	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.47	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.70	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.36	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/18/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00218-0001 R3B3
Location of origin:	Pa Ko Dam, Mae Lao, Chiang Rai, Northern Region
Country of origin:	Thailand
Date of collection:	2022-11-04
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485492	TAI/1/2023	Cattle	99.68	0	O	ME-SA	Ind-2001	e
1200394	TAI/2/2023	Cattle	98.58	0	None	None	None	None
297381	MAY/1577/2021(1)	Cattle	97.00	0	O	ME-SA	Ind-2001	e
297382	MAY/1577/2021(6)	Cattle	97.00	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	96.91	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297380	MAY/1576/2021(3)	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297387	MAY/498/2022	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297734	TAI/2/2021	Cattle	96.84	0	O	ME-SA	Ind-2001	e
659073	ISA/6/2023	Cattle	96.84	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.74	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.94	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.64	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		91.01	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.57	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	89.26	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	88.61	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	88.29	0	O	ME-SA	PanAsia-2	ICT-12
17602	UKG/35/2001		88.17	0	O	ME-SA	PanAsia	None
14798	SYR/18/62		88.03	0	O	WCSA-1	Syr-62	None

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

Virus sample: TAI/19/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00277-0001 R3B3
Location of origin:	Dong Mada, Mae Lao, Chiang Rai, Northern Region
Country of origin:	Thailand
Date of collection:	2022-12-20
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485478	TAI/6/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485476	TAI/4/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.37	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.94	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.73	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.54	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.90	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.78	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.29	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.17	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.70	0	O	ME-SA	PanAsia-2	ANT-10
17602	UKG/35/2001		87.54	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/20/2022

Sample details

Reception Date:	2023-08-16
Sender reference:	65B00291-0001 R3B3
Location of origin:	Don Dueng, Ban Mi, Lopburi, Central Region
Country of origin:	Thailand
Date of collection:	2022-12-20
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485480	TAI/8/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	99.53	0	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	99.53	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	99.37	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	99.21	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	99.21	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.79	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.42	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.54	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.59	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.78	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.47	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	87.86	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		87.38	0	O	ME-SA	PanAsia-2	ANT-10
8590	IRN/31/2009	Cattle	87.20	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/1/2023

Sample details

Reception Date:	2023-08-16
Sender reference:	66B00009-0001 R3B3
Location of origin:	Thon Hong, Phrom Khiri, Nakhon Si Thammarat, Southern Region
Country of origin:	Thailand
Date of collection:	2023-01-05
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

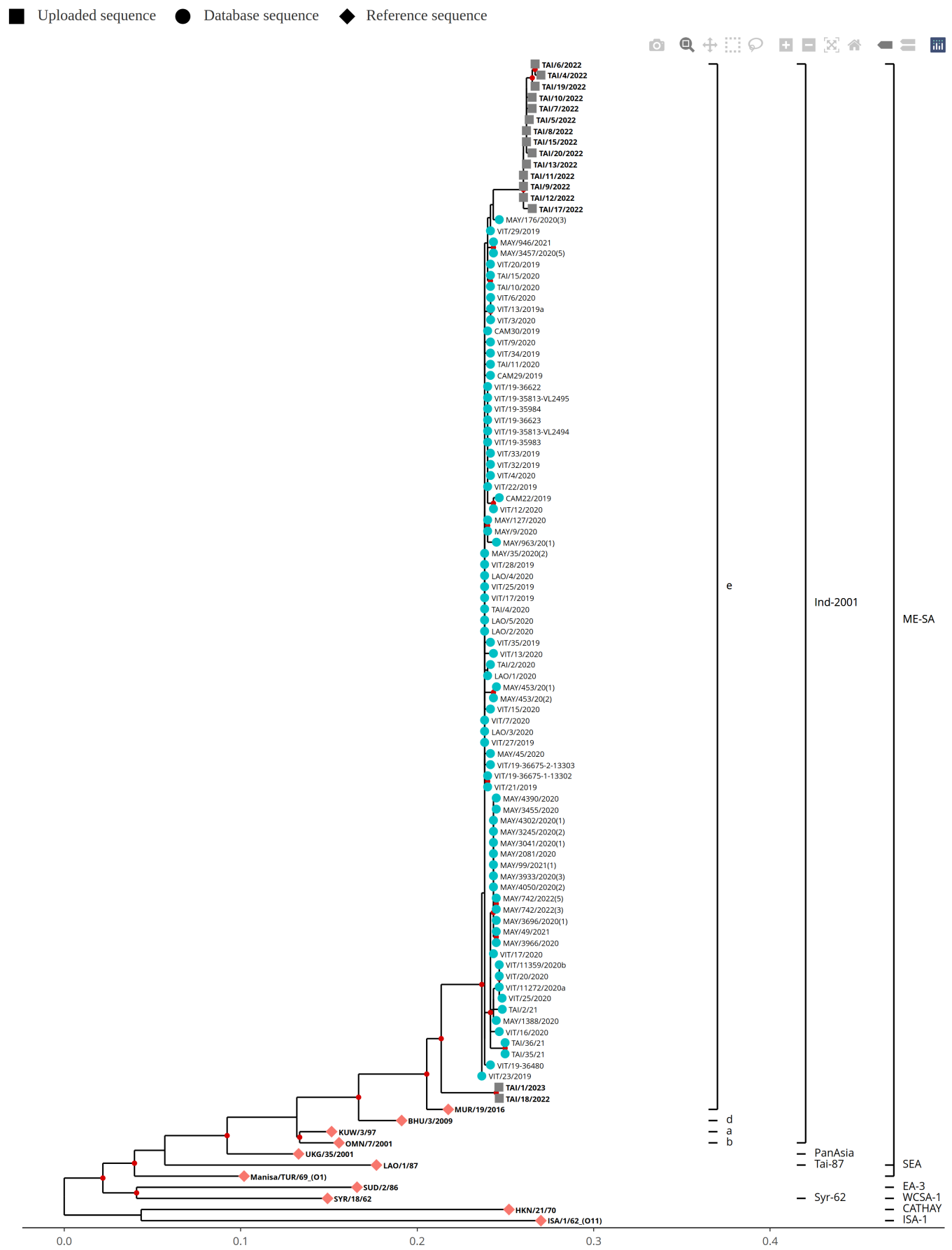
Material submitted for sequencing:	R3B3 WRL-LFBK1
Material Harvest Date:	2023-09-12
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485489	TAI/18/2022	Cattle	99.68	0	O	ME-SA	Ind-2001	e
1200394	TAI/2/2023	Cattle	98.58	0	None	None	None	None
297381	MAY/1577/2021(1)	Cattle	97.00	0	O	ME-SA	Ind-2001	e
297382	MAY/1577/2021(6)	Cattle	97.00	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	96.91	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297380	MAY/1576/2021(3)	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297387	MAY/498/2022	Cattle	96.84	0	O	ME-SA	Ind-2001	e
297734	TAI/2/2021	Cattle	96.84	0	O	ME-SA	Ind-2001	e
659073	ISA/6/2023	Cattle	96.84	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.74	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.94	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.64	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		91.01	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.57	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	89.26	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.61	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.61	0	O	ME-SA	PanAsia-2	PUN-16
17602	UKG/35/2001		88.17	0	O	ME-SA	PanAsia	None
14798	SYR/18/62		88.03	0	O	WCSA-1	Syr-62	None

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

Tree



Analysis Parameters

Query sequence set: WRLFMD/2023/000070
Number of related sequences reported: 78
Number of prototype sequences in tree: 11
Minimal VP1 subsequence match length: 610
Sequence alignment length: 635

Number of sequences in tree capped at: 100
Sequence alignment method: MAFFT 7.522
Phylogeny reconstruction method: IQ-TREE 2.26
Number of bootstrap samples: 1000
Displaying bootstrap values above: 75

FMDV VP1 Sequences included in the Phylogenetic Tree

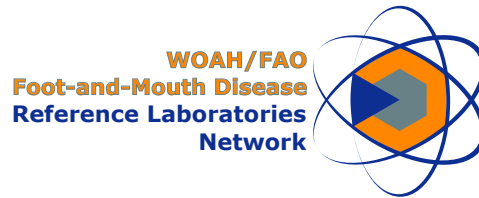
Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
VIT/12/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/13/2019a	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/13/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/17/2019	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35813-VL2494 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35813-VL2495 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35983 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35984 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36480 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36622 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36623 *	None	Pig	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36675-1-13302 *	None		RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36675-2-13303 *	None		RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/20/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/21/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/22/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/23/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/25/2019	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/27/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/28/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/29/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/3/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/32/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/33/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/34/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/35/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/4/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/6/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/7/2020	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/9/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
CAM22/2019 *	MZ634454	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
CAM29/2019 *	MZ634455	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
CAM30/2019 *	MZ634456	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
LAO/1/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/2/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/3/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/4/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/5/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
MAY/453/20(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/453/20(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/963/20(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/9/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/45/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/35/2020(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/127/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/176/2020(3) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/1388/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/2081/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3041/2020(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3245/2020(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3457/2020(5) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3455/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3696/2020(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3966/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3933/2020(3) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/4050/2020(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/4302/2020(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/4390/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/946/2021 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/49/2021 *	None	Water Buffalo	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/99/2021(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/742/2022(3) *	None	Goat	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
MAY/742/2022(5) *	None	Goat	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
TAI/2/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/4/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/10/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/11/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/15/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/2/21 *	None	Bovine	TRRL	Thailand	O/ME-SA/Ind-2001/e	None
TAI/35/21 *	None	Bovine	TRRL	Thailand	O/ME-SA/Ind-2001/e	None
TAI/36/21 *	None	Bovine	TRRL	Thailand	O/ME-SA/Ind-2001/e	None
VIT/15/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/16/2020	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/17/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/20/2020	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/25/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/11272/2020a *	None	Pig	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/11359/2020b *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None

* Not a WRLFMD Reference Number;

^ Not Available



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

FMDV Genotyping Report v.2

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FMDV serotype: O

Country: Thailand

Year: 2023-2024

Batch: WRLFMD/2025/000014

No. of sequences: 14

Reported date: 17 October 2025

WRLFMD Website: <https://www.wrlfmd.org/>

Email: reporting@pirbright.ac.uk

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Virus sample: TAI/2/2023

Sample details

Reception Date:	2025-06-19
Sender reference:	66B00060-0002 R3B3
Location of origin:	Huai Sai, Mueang Prachuap Khiri Khan, Prachuap Khiri Khan, Western
Country of origin:	Thailand
Date of collection:	2023-03-03
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485489	TAI/18/2022	Cattle	98.58	0	O	ME-SA	Ind-2001	e
485492	TAI/1/2023	Cattle	98.58	0	O	ME-SA	Ind-2001	e
297387	MAY/498/2022	Cattle	96.37	0	O	ME-SA	Ind-2001	e
297734	TAI/2/2021	Cattle	96.37	0	O	ME-SA	Ind-2001	e
297381	MAY/1577/2021(1)	Cattle	96.21	0	O	ME-SA	Ind-2001	e
297382	MAY/1577/2021(6)	Cattle	96.21	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	96.09	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	96.05	0	O	ME-SA	Ind-2001	e
297380	MAY/1576/2021(3)	Cattle	96.05	0	O	ME-SA	Ind-2001	e
659073	ISA/6/2023	Cattle	96.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	95.26	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.15	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.85	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.22	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.57	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.77	0	O	ME-SA	PanAsia-2	PUN-16
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
15944	Manisa/TUR/69_(O1)		88.50	0	O	ME-SA	None	None
8590	IRN/31/2009	Cattle	88.47	0	O	ME-SA	PanAsia-2	FAR-09
8912	IRN/88/2009		88.20	0	O	ME-SA	PanAsia-2	ANT-10

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

Virus sample: TAI/1/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00006-0004 R3B3
Location of origin:	Mae Thalop, Chai Prakan, Chiang Mai, Northern
Country of origin:	Thailand
Date of collection:	2024-01-18
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200397	TAI/3/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200396	TAI/2/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	98.10	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.95	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.95	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	97.95	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	97.79	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.32	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.96	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.39	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.08	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.96	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
17330	UAE/4/2008	Gazelle	88.31	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.15	0	O	ME-SA	PanAsia-2	ICT-12
212	AFG/30/2010		87.58	0	O	ME-SA	PanAsia-2	KHO-10
17602	UKG/35/2001		87.56	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/2/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00013-0002 R3B3
Location of origin:	Mae Thalop, Chai Prakan, Chiang Mai, Northern
Country of origin:	Thailand
Date of collection:	2024-02-02
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200395	TAI/1/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200397	TAI/3/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	98.10	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	98.10	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	98.10	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	97.95	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.79	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.79	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	97.79	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.16	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.80	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.24	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.92	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.80	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
17330	UAE/4/2008	Gazelle	88.15	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	87.99	0	O	ME-SA	PanAsia-2	ICT-12
212	AFG/30/2010		87.42	0	O	ME-SA	PanAsia-2	KHO-10
17602	UKG/35/2001		87.40	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/3/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00035-0001 R3B3
Location of origin:	Huai Sat Yai, Hua Hin, Prachuap Khiri Khan, Western
Country of origin:	Thailand
Date of collection:	2024-03-04
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200395	TAI/1/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200396	TAI/2/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	98.26	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	98.10	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.95	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.95	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	97.95	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	97.79	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.32	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.96	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.39	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.08	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.96	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.33	0	O	ME-SA	PanAsia-2	PUN-16
17330	UAE/4/2008	Gazelle	88.31	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.15	0	O	ME-SA	PanAsia-2	ICT-12
212	AFG/30/2010		87.58	0	O	ME-SA	PanAsia-2	KHO-10
17602	UKG/35/2001		87.56	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/4/2024

Sample details	
Reception Date:	2025-06-19
Sender reference:	67B00182-0001 R3B3
Location of origin:	Doi Tao, Doi Tao, Chiang Mai, Northern
Country of origin:	Thailand
Date of collection:	2024-07-24
Host species:	cattle

Genotyping details	
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details	
Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200401	TAI/7/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200407	TAI/13/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200402	TAI/8/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200408	TAI/14/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200406	TAI/12/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.60	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	95.42	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	95.31	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
297226	ISA/3/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.21	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.52	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.05	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.73	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.78	0	O	ME-SA	Srl-97	None
212	AFG/30/2010		88.19	0	O	ME-SA	PanAsia-2	KHO-10
12855	PAK/7/2016	Cattle	88.05	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
8875	IRN/8/2005	Sheep	87.84	0	O	ME-SA	PanAsia-2	None
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/5/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00185-0001 R3B3
Location of origin:	Ban Yang, Mueang Nakhon Pathom, Nakhon Pathom, Western
Country of origin:	Thailand
Date of collection:	2024-07-30
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200404	TAI/10/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200403	TAI/9/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.47	1	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.16	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.47	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.42	0	O	ME-SA	Ind-2001	d
10350	KUW/3/97		89.75	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.63	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
8912	IRN/88/2009		87.86	0	O	ME-SA	PanAsia-2	ANT-10
12855	PAK/7/2016	Cattle	87.86	0	O	ME-SA	PanAsia-2	PUN-16
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09
10481	LAO/2/2006	Cattle	87.68	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/6/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00187-0001 R3B3
Location of origin:	Wang Chan, Kaeng Krachan, Phetchaburi, Western
Country of origin:	Thailand
Date of collection:	2024-08-01
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
485481	TAI/9/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.16	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.16	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	97.16	1	O	ME-SA	Ind-2001	e
485479	TAI/7/2022	Cattle	97.00	0	O	ME-SA	Ind-2001	e
485482	TAI/10/2022	Cattle	97.00	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	97.00	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.31	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.10	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.48	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.38	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.26	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	89.10	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.92	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.80	0	O	ME-SA	PanAsia-2	PUN-16
8912	IRN/88/2009		88.34	0	O	ME-SA	PanAsia-2	ANT-10
17602	UKG/35/2001		88.17	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/7/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00214-0001 B3
Location of origin:	Tha Pha, Ban Pong, Ratchaburi, Western
Country of origin:	Thailand
Date of collection:	2024-08-20
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200398	TAI/4/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200407	TAI/13/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200402	TAI/8/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200408	TAI/14/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200406	TAI/12/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.60	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	95.42	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	95.31	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
297226	ISA/3/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.21	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.52	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.05	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.73	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.78	0	O	ME-SA	Srl-97	None
212	AFG/30/2010		88.19	0	O	ME-SA	PanAsia-2	KHO-10
12855	PAK/7/2016	Cattle	88.05	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
8875	IRN/8/2005	Sheep	87.84	0	O	ME-SA	PanAsia-2	None
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/8/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00219-0001 B3
Location of origin:	Than Kasem, Phra Phutthabat, Saraburi, Central
Country of origin:	Thailand
Date of collection:	2024-08-29
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-25
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200398	TAI/4/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200401	TAI/7/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200407	TAI/13/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200408	TAI/14/2024	Cattle	99.68	0	O	ME-SA	Ind-2001	e
1200406	TAI/12/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.44	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	95.15	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	95.10	0	O	ME-SA	Ind-2001	e
297226	ISA/3/2022	Cattle	95.10	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.05	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.36	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		89.89	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.57	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.63	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.05	0	O	ME-SA	PanAsia-2	PUN-16
212	AFG/30/2010		88.03	0	O	ME-SA	PanAsia-2	KHO-10
12780	PAK/58/2012	Cattle	87.82	0	O	ME-SA	PanAsia-2	ICT-12
8875	IRN/8/2005	Sheep	87.68	0	O	ME-SA	PanAsia-2	None
8590	IRN/31/2009	Cattle	87.52	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/9/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00220 B4
Location of origin:	Khlong Hin, Ao Luek, Krabi, Southern
Country of origin:	Thailand
Date of collection:	2024-09-02
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200404	TAI/10/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
1200399	TAI/5/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.31	1	O	ME-SA	Ind-2001	e
485486	TAI/15/2022	Cattle	97.31	1	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.63	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.54	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.90	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.10	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.78	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.29	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
17602	UKG/35/2001		88.01	0	O	ME-SA	PanAsia	None
212	AFG/30/2010		87.54	0	O	ME-SA	PanAsia-2	KHO-10

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

Virus sample: TAI/10/2024

Sample details	
Reception Date:	2025-06-19
Sender reference:	67B00235 R3B4
Location of origin:	Si Thoi, Mae Suai, Chiang Rai, Northern
Country of origin:	Thailand
Date of collection:	2024-09-19
Host species:	cattle

Genotyping details	
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details	
Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-24
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200399	TAI/5/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200403	TAI/9/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
485481	TAI/9/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485483	TAI/11/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485484	TAI/12/2022	Cattle	97.63	0	O	ME-SA	Ind-2001	e
485485	TAI/13/2022	Cattle	97.63	1	O	ME-SA	Ind-2001	e
485478	TAI/6/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485480	TAI/8/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485488	TAI/17/2022	Cattle	97.47	0	O	ME-SA	Ind-2001	e
485477	TAI/5/2022	Cattle	97.31	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.63	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	92.58	0	O	ME-SA	Ind-2001	d
10350	KUW/3/97		89.90	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.10	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.78	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.29	0	O	ME-SA	PanAsia-2	ICT-12
8912	IRN/88/2009		88.02	0	O	ME-SA	PanAsia-2	ANT-10
12855	PAK/7/2016	Cattle	88.01	0	O	ME-SA	PanAsia-2	PUN-16
8590	IRN/31/2009	Cattle	87.84	0	O	ME-SA	PanAsia-2	FAR-09
8355	IRN/18/2010	Cattle	87.70	0	O	ME-SA	PanAsia-2	BAL-09

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

Virus sample: TAI/12/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00241 R4B3
Location of origin:	Tha Pla Duk, Mae Tha, Lamphun, Northern
Country of origin:	Thailand
Date of collection:	2024-09-25
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-07-01
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200398	TAI/4/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
1200401	TAI/7/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
1200407	TAI/13/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
1200402	TAI/8/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
1200408	TAI/14/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.11	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	94.94	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	94.82	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	94.79	0	O	ME-SA	Ind-2001	e
297226	ISA/3/2022	Cattle	94.79	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.05	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.06	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		89.57	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.27	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.63	0	O	ME-SA	Srl-97	None
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	87.86	0	O	ME-SA	PanAsia-2	PUN-16
212	AFG/30/2010		87.72	0	O	ME-SA	PanAsia-2	KHO-10
17602	UKG/35/2001		87.72	0	O	ME-SA	PanAsia	None
10481	LAO/2/2006	Cattle	87.40	0	O	ME-SA	PanAsia	None

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

Virus sample: TAI/13/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00245 R1B3
Location of origin:	Nong O, Nong Wua So, Udon Thani, North-east
Country of origin:	Thailand
Date of collection:	2024-09-27
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-07-01
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200398	TAI/4/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200401	TAI/7/2024	Cattle	100.00	0	O	ME-SA	Ind-2001	e
1200402	TAI/8/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200408	TAI/14/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200406	TAI/12/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.60	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	95.42	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	95.31	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
297226	ISA/3/2022	Cattle	95.26	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.21	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.52	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.05	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.73	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.78	0	O	ME-SA	Srl-97	None
212	AFG/30/2010		88.19	0	O	ME-SA	PanAsia-2	KHO-10
12855	PAK/7/2016	Cattle	88.05	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	87.97	0	O	ME-SA	PanAsia-2	ICT-12
8875	IRN/8/2005	Sheep	87.84	0	O	ME-SA	PanAsia-2	None
8590	IRN/31/2009	Cattle	87.68	0	O	ME-SA	PanAsia-2	FAR-09

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

Virus sample: TAI/14/2024

Sample details

Reception Date:	2025-06-19
Sender reference:	67B00250-0002 R3B3
Location of origin:	On Klang, Mae On, Chiang Mai, Northern
Country of origin:	Thailand
Date of collection:	2024-09-30
Host species:	cattle

Genotyping details

Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e

Sequencing details

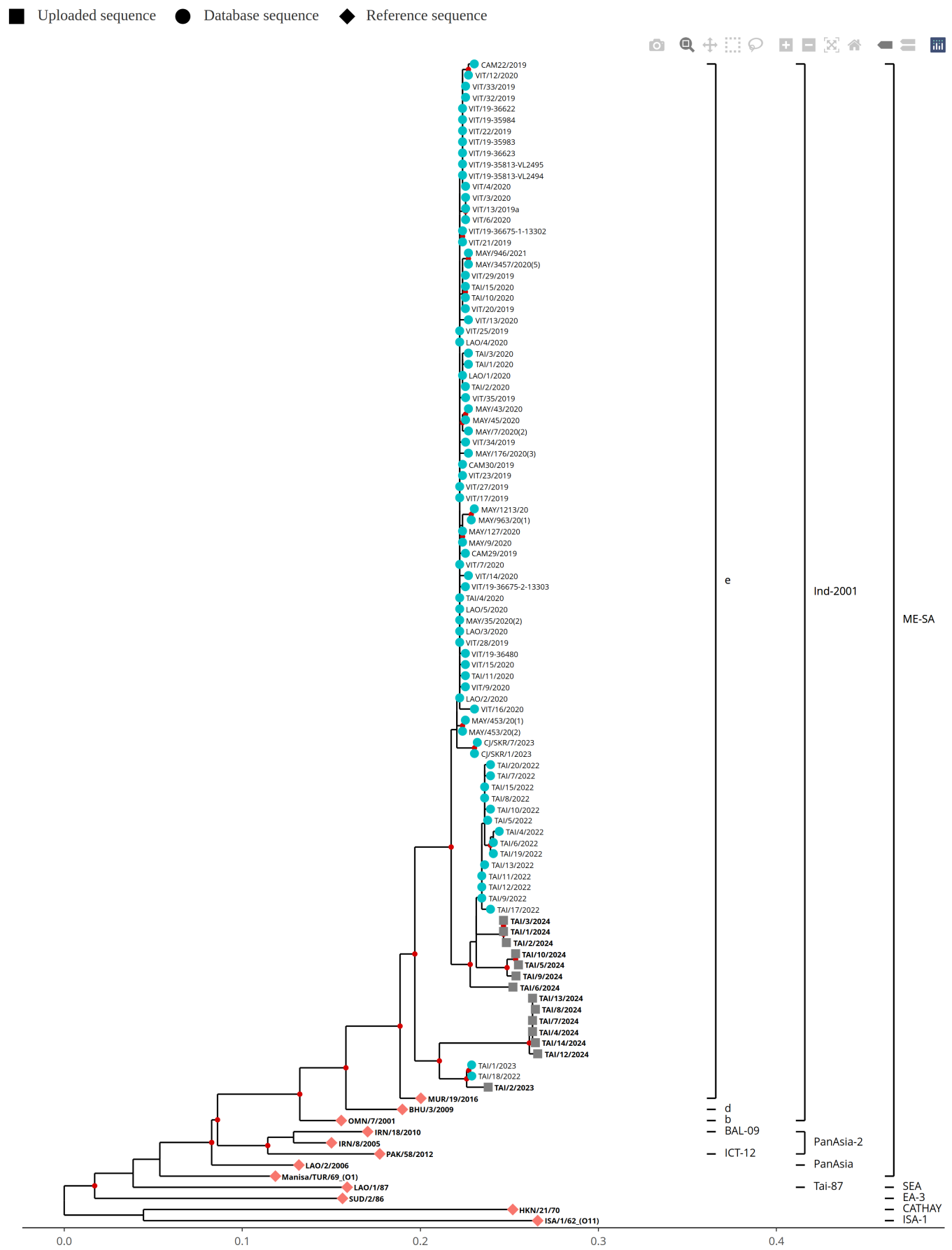
Material submitted for sequencing:	WRL-LFBK2
Material Harvest Date:	2025-07-03
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1200398	TAI/4/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200401	TAI/7/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200407	TAI/13/2024	Cattle	99.84	0	O	ME-SA	Ind-2001	e
1200402	TAI/8/2024	Cattle	99.68	0	O	ME-SA	Ind-2001	e
1200406	TAI/12/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
297236	ISA/DeliSerdang/A01220762/2022	Cattle	95.76	0	O	ME-SA	Ind-2001	e
297235	ISA/Langkat/A01220761/2022	Cattle	95.58	0	O	ME-SA	Ind-2001	e
297245	ISA/PangkalPinang/PVT/2022	Cattle	95.47	0	O	ME-SA	Ind-2001	e
297250	ISA/Banjarnegara/A04222582/2022	Cattle	95.42	0	O	ME-SA	Ind-2001	e
297225	ISA/1/2022	Cattle	95.42	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	93.36	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	90.68	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.20	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.57	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.94	0	O	ME-SA	Srl-97	None
12855	PAK/7/2016	Cattle	88.21	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	88.13	0	O	ME-SA	PanAsia-2	ICT-12
212	AFG/30/2010		88.03	0	O	ME-SA	PanAsia-2	KHO-10
8875	IRN/8/2005	Sheep	87.99	0	O	ME-SA	PanAsia-2	None
8590	IRN/31/2009	Cattle	87.84	0	O	ME-SA	PanAsia-2	FAR-09

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

Tree



Analysis Parameters

Query sequence set: WRLFMD/2025/000014
Number of related sequences reported: 79
Number of prototype sequences in tree: 12
Minimal VP1 subsequence match length: 610
Sequence alignment length: 634

Number of sequences in tree capped at: 100
Sequence alignment method: MAFFT 7.522
Phylogeny reconstruction method: IQ-TREE 2.26
Number of bootstrap samples: 1000
Displaying bootstrap values above: 75

FMDV VP1 Sequences included in the Phylogenetic Tree

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
VIT/12/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/13/2019a	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/13/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/14/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/17/2019	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35813-VL2494 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35813-VL2495 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35983 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-35984 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36480 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36622 *	None	Cattle	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36623 *	None	Pig	RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36675-1-13302 *	None		RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/19-36675-2-13303 *	None		RAHO6	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/20/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/21/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/22/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/23/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/25/2019	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/27/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/28/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/29/2019	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/3/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/32/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/33/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/34/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/35/2019	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/4/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/6/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/7/2020	None	Pig	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/9/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
CAM22/2019 *	MZ634454	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
CAM29/2019 *	MZ634455	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
CAM30/2019 *	MZ634456	Cattle	APQA	Cambodia	O/ME-SA/Ind-2001/e	None
LAO/1/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/2/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/3/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/4/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
LAO/5/2020	None	Cattle	WRLFMD	Laos	O/ME-SA/Ind-2001/e	None
MAY/453/20(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/453/20(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/963/20(1) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/1213/20 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/7/2020(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/9/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/43/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/45/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/35/2020(2) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/127/2020 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/176/2020(3) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/3457/2020(5) *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
MAY/946/2021 *	None	Cattle	MNFMDL	Malaysia	O/ME-SA/Ind-2001/e	None
TAI/1/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/2/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/3/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/4/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/10/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/11/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/15/2020	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
VIT/15/2020	None	Cattle	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
VIT/16/2020	None	Water Buffalo	WRLFMD	Vietnam	O/ME-SA/Ind-2001/e	None
TAI/4/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
TAI/5/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/6/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/7/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/8/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/9/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/10/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/11/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/12/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/13/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/15/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/17/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/18/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/19/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/20/2022	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
TAI/1/2023	None	Cattle	WRLFMD	Thailand	O/ME-SA/Ind-2001/e	None
CJ/SKR/1/2023 *	PP156917	Cattle	APQA	South Korea (Republic of Korea)	O/ME-SA/Ind-2001/e	38689851
CJ/SKR/7/2023 *	PP156919	Cattle	APQA	South Korea (Republic of Korea)	O/ME-SA/Ind-2001/e	38689851

* Not a WRLFMD Reference Number;

^ Not Available