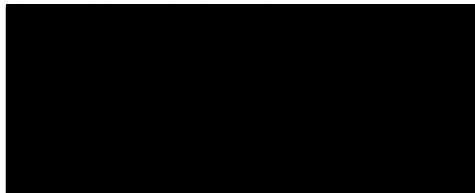




FMD Genotyping Report

Lab Reference WRL batch Number: WRLFMD/2025/000015

Sender Details:

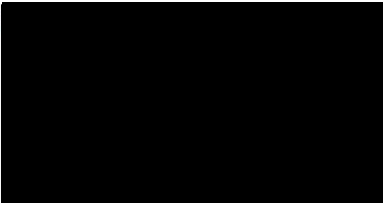


Date Received: 03/07/2025

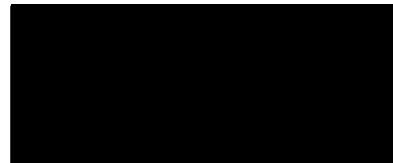
Country of Origin*: Nepal

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

Result:



Official Stamp:

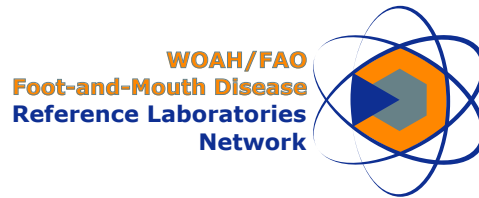


Date:

16/8/25

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

Generated from: FMDtype | FMDV Genotyping Tool

Downloaded on: 12 August 2025

Citation: WRLFMD. 2025. FMDV Genotyping Report [WRLFMD/2025/000015]. (Accessed 12/08/25)

FMDV serotype: O

Country: Nepal

Year: 2024-2025

Batch: WRLFMD/2025/000015

No. of sequences: 12

Reported date: 12 August 2025

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

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: NEP/25/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	1 Np FMD 210/80/81
Location of origin:	Gajuri Rural Municipality-5, Dhading District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-05-21
Host species:	goat

Genotyping details

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

Sequencing details

Material submitted for sequencing:	WRL-LFBK2
Material Harvest Date:	2025-07-11
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	98.89	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.62	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.93	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.15	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.20	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.56	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.96	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.31	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.31	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(O1)		88.13	0	O	ME-SA	None	None
212	AFG/30/2010		87.86	0	O	ME-SA	PanAsia-2	KHO-10

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

Virus sample: NEP/30/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	6 Np FMD 219/80/81
Location of origin:	Nilkantha Municipality-11, Dhading District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-06-19
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:	2025-07-09
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	98.58	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	98.58	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	98.58	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	98.58	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	98.58	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.30	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.61	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.15	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.89	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.24	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.96	0	O	ME-SA	Ind-2001	c
12780	PAK/58/2012	Cattle	88.31	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.31	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(O1)		88.13	0	O	ME-SA	None	None
10481	LAO/2/2006	Cattle	87.56	0	O	ME-SA	PanAsia	None

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

Virus sample: NEP/31/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	7 Np FMD 220/80/81
Location of origin:	Nilkantha Municipality-11, Dhading District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-06-19
Host species:	water buffalo

Genotyping details

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

Sequencing details

Material submitted for sequencing:	WRL-LFBK2
Material Harvest Date:	2025-07-11
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	98.74	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.46	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.77	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.31	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.05	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.40	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.80	0	O	ME-SA	Ind-2001	c
15944	Manisa/TUR/69_(01)		88.29	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	88.15	0	O	ME-SA	PanAsia-2	ICT-12
12855	PAK/7/2016	Cattle	88.15	0	O	ME-SA	PanAsia-2	PUN-16
212	AFG/30/2010		87.70	0	O	ME-SA	PanAsia-2	KHO-10

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

Virus sample: NEP/34/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	10 Np FMD 224/80/81
Location of origin:	Panauti Municipality-3, Kavrepalanchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-07-12
Host species:	goat

Genotyping details

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

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-07-09
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	98.74	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.46	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.77	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		91.00	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		90.05	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.40	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	89.12	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	88.15	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(O1)		87.97	0	O	ME-SA	None	None
12427	PAK/16/2010	Cattle	87.76	0	O	ME-SA	PanAsia-2	PUN-10
10481	LAO/2/2006	Cattle	87.72	0	O	ME-SA	PanAsia	None

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

Virus sample: NEP/37/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	11 Np FMD 4/81/82
Location of origin:	Mahankal Rural Municipality-1, Lalitpur District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-08-06
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:	2025-07-11
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659120	NEP/1/2024	Cattle	99.53	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	99.37	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659112	NEP/8/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659123	NEP/5/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659131	NEP/19/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.91	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.89	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.48	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.52	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.19	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.17	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	88.15	0	O	ME-SA	PanAsia-2	PUN-16
17602	UKG/35/2001		87.94	0	O	ME-SA	PanAsia	None
12780	PAK/58/2012	Cattle	87.84	0	O	ME-SA	PanAsia-2	ICT-12
15944	Manisa/TUR/69_(O1)		87.76	0	O	ME-SA	None	None

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

Virus sample: NEP/43/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	19 Np FMD 25/81/82
Location of origin:	Bahrabise Municipality-1, Sindhupalchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-11-24
Host species:	goat

Genotyping details

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

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-07-10
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.30	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.61	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.20	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.26	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.61	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.33	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	87.99	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(01)		87.82	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	87.68	0	O	ME-SA	PanAsia-2	ICT-12
12427	PAK/16/2010	Cattle	87.60	0	O	ME-SA	PanAsia-2	PUN-10

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

Virus sample: NEP/44/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	20 Np FMD 26/81/82
Location of origin:	Bahrabise Municipality-1, Sindhupalchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-11-24
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:	2025-07-10
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.30	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.61	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.20	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.26	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.61	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.33	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	87.99	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(01)		87.82	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	87.68	0	O	ME-SA	PanAsia-2	ICT-12
12427	PAK/16/2010	Cattle	87.60	0	O	ME-SA	PanAsia-2	PUN-10

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

Virus sample: NEP/45/2024

Sample details

Reception Date:	2025-07-03
Sender reference:	21 Np FMD 28/81/82
Location of origin:	Bahrabise Municipality-1, Sindhupalchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-11-24
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:	2025-07-09
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	98.89	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.15	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.46	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.05	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.10	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.45	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.17	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	87.84	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(01)		87.66	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	87.52	0	O	ME-SA	PanAsia-2	ICT-12
17602	UKG/35/2001		87.52	0	O	ME-SA	PanAsia	None

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

Virus sample: NEP/46/2024a

Sample details

Reception Date:	2025-07-03
Sender reference:	22 Np FMD 30/81/82
Location of origin:	Bahrabise Municipality-2, Sindhupalchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-11-24
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:	2025-07-09
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.30	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.61	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.20	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.26	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.61	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.33	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	87.99	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(01)		87.82	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	87.68	0	O	ME-SA	PanAsia-2	ICT-12
12427	PAK/16/2010	Cattle	87.60	0	O	ME-SA	PanAsia-2	PUN-10

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

Virus sample: NEP/46/2024b

Sample details

Reception Date:	2025-07-03
Sender reference:	22 Np FMD 30/81/82
Location of origin:	Bahrabise Municipality-2, Sindhupalchowk District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2024-11-24
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:	2025-07-09
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659120	NEP/1/2024	Cattle	99.53	0	O	ME-SA	Ind-2001	e
659128	NEP/14/2024	Water Buffalo	99.37	0	O	ME-SA	Ind-2001	e
659129	NEP/15/2024	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659112	NEP/8/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659123	NEP/5/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659131	NEP/19/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.91	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.89	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.48	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.52	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	89.19	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.17	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	88.15	0	O	ME-SA	PanAsia-2	PUN-16
17602	UKG/35/2001		87.94	0	O	ME-SA	PanAsia	None
12780	PAK/58/2012	Cattle	87.84	0	O	ME-SA	PanAsia-2	ICT-12
15944	Manisa/TUR/69_(O1)		87.76	0	O	ME-SA	None	None

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

Virus sample: NEP/3/2025a

Sample details

Reception Date:	2025-07-03
Sender reference:	28 Np FMD 49/81/82
Location of origin:	Melung Rural Municipality-2, Dolakha District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2025-04-01
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:	2025-07-23
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	98.89	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	98.74	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	98.58	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	98.58	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.46	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.77	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.36	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.42	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.77	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.49	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	88.47	0	O	ME-SA	PanAsia-2	PUN-16
12780	PAK/58/2012	Cattle	88.15	0	O	ME-SA	PanAsia-2	ICT-12
15944	Manisa/TUR/69_(O1)		87.97	0	O	ME-SA	None	None
12427	PAK/16/2010	Cattle	87.76	0	O	ME-SA	PanAsia-2	PUN-10

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

Virus sample: NEP/3/2025b

Sample details

Reception Date:	2025-07-03
Sender reference:	28 Np FMD 49/81/82
Location of origin:	Melung Rural Municipality-2, Dolakha District, Bagmati Province
Country of origin:	Nepal
Date of collection:	2025-04-01
Host species:	cattle

Genotyping details

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

Sequencing details

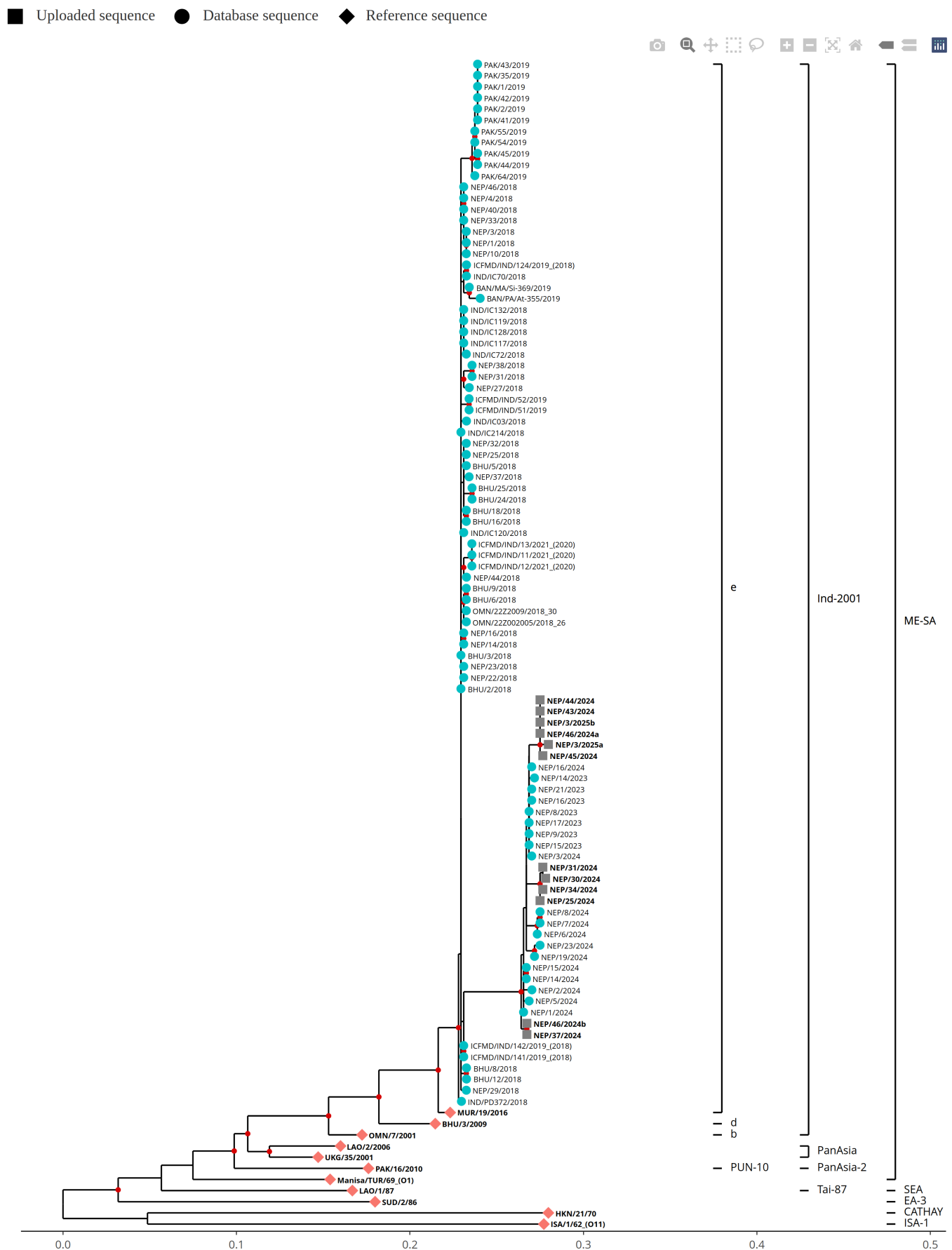
Material submitted for sequencing:	WRL-LFBK2
Material Harvest Date:	2025-07-23
Sequence length:	636
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
659112	NEP/8/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659113	NEP/9/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659116	NEP/15/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659118	NEP/17/2023	Cattle	99.37	0	O	ME-SA	Ind-2001	e
659117	NEP/16/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659119	NEP/21/2023	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659122	NEP/3/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659130	NEP/16/2024	Cattle	99.21	0	O	ME-SA	Ind-2001	e
659115	NEP/14/2023	Cattle	99.05	0	O	ME-SA	Ind-2001	e
659120	NEP/1/2024	Cattle	99.05	0	O	ME-SA	Ind-2001	e
FMDV VP1 Prototype Sequences*								
10989	MUR/19/2016	Cattle	94.30	0	O	ME-SA	Ind-2001	e
3294	BHU/3/2009	Cattle	91.61	0	O	ME-SA	Ind-2001	d
11999	OMN/7/2001		90.20	0	O	ME-SA	Ind-2001	b
10350	KUW/3/97		89.26	0	O	ME-SA	Ind-2001	a
14504	SRL/2/97	Bovine	88.61	0	O	ME-SA	Srl-97	None
17330	UAE/4/2008	Gazelle	88.33	0	O	ME-SA	Ind-2001	c
12855	PAK/7/2016	Cattle	87.99	0	O	ME-SA	PanAsia-2	PUN-16
15944	Manisa/TUR/69_(01)		87.82	0	O	ME-SA	None	None
12780	PAK/58/2012	Cattle	87.68	0	O	ME-SA	PanAsia-2	ICT-12
12427	PAK/16/2010	Cattle	87.60	0	O	ME-SA	PanAsia-2	PUN-10

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

Tree



Analysis Parameters

Query sequence set: WRLFMD/2025/000015
Number of related sequences reported: 82
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
NEP/1/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/10/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/14/2018	MT276849	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/16/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/22/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/23/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/25/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/27/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/29/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/3/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/31/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/32/2018	None	Pig	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/33/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/37/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/38/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/4/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/40/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/44/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/46/2018	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
PAK/1/2019	MN953619	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/2/2019	MN953620	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/35/2019	MW558028	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/41/2019	MW558030	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/42/2019	MW558031	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/43/2019	MW558032	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/44/2019	MW558033	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/45/2019	MW558034	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/54/2019	MW558039	Water Buffalo	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/55/2019	MW558040	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
PAK/64/2019	MW558042	Cattle	WRLFMD	Pakistan	O/ME-SA/Ind-2001/e	None
BAN/PA/At-355/2019 *	OP320425	Cattle	UNIV-DHAKA	Bangladesh	O/ME-SA/Ind-2001/e	None
BAN/MA/Si-369/2019 *	OP320433	Cattle	UNIV-DHAKA	Bangladesh	O/ME-SA/Ind-2001/e	None
IND/PD372/2018 *	MT919006	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC03/2018 *	MT936090	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC70/2018 *	MT936099	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC72/2018 *	MT936100	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC117/2018 *	MT936101	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC119/2018 *	MT936102	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC120/2018 *	MT936103	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC128/2018 *	MT936104	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC132/2018 *	MT936105	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
IND/IC214/2018 *	MT936112	Cattle	PD-FMD	India	O/ME-SA/Ind-2001/e	None
OMN/22Z2009/2018_30 *	None	Cattle	ANSES	Oman	O/ME-SA/Ind-2001/e	None
BHU/12/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/16/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/18/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/2/2018	MT276847	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/24/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/25/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/3/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/5/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/6/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/8/2018	None	Cattle	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
BHU/9/2018	None	Goat	WRLFMD	Bhutan	O/ME-SA/Ind-2001/e	None
ICFMD/IND/141/2019_(2018) *	OQ732585	Water Buffalo	ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/142/2019_(2018) *	OQ732586	Water Buffalo	ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/124/2019_(2018) *	OQ732584		ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/51/2019 *	OQ732602	Cattle	ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/52/2019 *	OQ732603	Cattle	ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/11/2021_(2020) *	OQ806936		ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/12/2021_(2020) *	OQ806937		ICAR-DFMD	India	O/ME-SA/Ind-2001/e	None
ICFMD/IND/13/2021_(2020) *	OQ806938		ICAR-DFMD	India	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
OMN/22Z002005/2018_26 *	None	Cattle	ANSES	Oman	O/ME-SA/Ind-2001/e	None
NEP/8/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/9/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/14/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/15/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/16/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/17/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/21/2023	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/1/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/2/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/3/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/5/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/6/2024	None	Goat	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/7/2024	None	Water Buffalo	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/8/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/14/2024	None	Water Buffalo	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/15/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/16/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/19/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None
NEP/23/2024	None	Cattle	WRLFMD	Nepal	O/ME-SA/Ind-2001/e	None

* Not a WRLFMD Reference Number;

^ Not Available