



FMD Genotyping Report

Lab Reference WRL batch Number: WRLFMD/2025/000017

Sender Details:



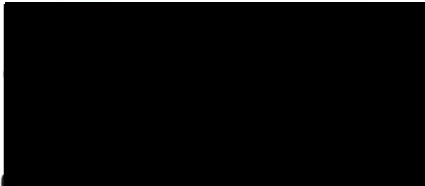
Date Received: 7/11/2025

Country of Origin*: Kenya

Work has now been completed in respect of the samples recently submitted and the details are as attached.

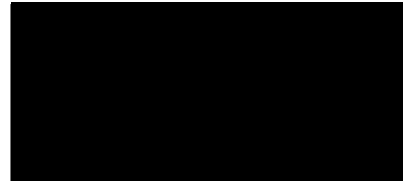
Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:



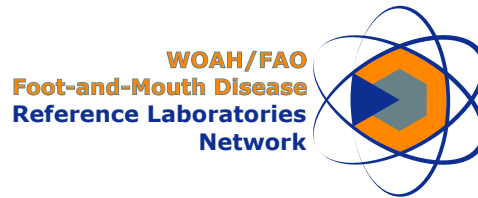
Date: 20/1/2026

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

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Downloaded on: 16 January 2026

Citation: WRLFMD. 2026. FMDV Genotyping Report [WRLFMD/2025/000017]. (Accessed 16/01/26)

FMDV serotype: SAT2

Country: Kenya

Year: 2024-2025

Batch: WRLFMD/2025/000017

No. of sequences: 5

Reported date: 16 January 2026

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

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: KEN/3/2024

Sample details

Reception Date:	2025-11-07
Sender reference:	K14/24
Location of origin:	Gilgil, Nakuru
Country of origin:	Kenya
Date of collection:	2024-02-29
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	IV
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-12-02
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
9992	KEN/19/2017	Bovine	95.15	0	SAT2	IV	None	None
659224	KEN/13/2021	Cattle	94.52	0	SAT2	IV	None	None
659225	KEN/14/2021	Cattle	94.52	0	SAT2	IV	None	None
10229	Ken/MMB37/2012	African Buffalo	92.80	1	SAT2	IV	None	None
9652	K13/02	Cattle	89.10	0	SAT2	IV	None	None
9996	KEN/2/2002	Cattle	88.63	0	SAT2	IV	None	None
10314	KEN_002/2002		88.63	0	SAT2	IV	None	None
10201	KEN/9/99		88.47	0	SAT2	IV	None	None
10078	KEN/33/91	Bovine	88.32	0	SAT2	IV	None	None
10125	KEN/6/2004	Cattle	88.20	0	SAT2	IV	None	None
FMDV VP1 Prototype Sequences*								
9839	KEN/1/84	Cattle	85.56	0	SAT2	IV	None	None
9892	KEN/11/2009	Cattle	85.38	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	84.58	0	SAT2	IV	None	None
13804	SA/106/59		81.54	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	78.90	0	SAT2	I	None	None
19174	ZIM/7/83	Cattle	76.94	0	SAT2	II	None	None
5058	EGY/3/2012	Cattle	73.36	0	SAT2	VII	Ghb-12	None
10642	LIB/39/2012	Cattle	72.49	0	SAT2	VII	Lib-12	None

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

Virus sample: KEN/10/2025

Sample details

Reception Date:	2025-11-07
Sender reference:	K19/25
Location of origin:	Silibwe, Bomet
Country of origin:	Kenya
Date of collection:	2025-02-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	IV
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK2
Material Harvest Date:	2025-11-22
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
9992	KEN/19/2017	Bovine	95.15	0	SAT2	IV	None	None
659224	KEN/13/2021	Cattle	94.52	0	SAT2	IV	None	None
659225	KEN/14/2021	Cattle	94.52	0	SAT2	IV	None	None
10229	Ken/MMB37/2012	African Buffalo	93.11	1	SAT2	IV	None	None
9652	K13/02	Cattle	88.94	0	SAT2	IV	None	None
15149	TAN/43/2009	Cattle	88.80	0	SAT2	IV	None	None
10201	KEN/9/99		88.78	0	SAT2	IV	None	None
10078	KEN/33/91	Bovine	88.63	0	SAT2	IV	None	None
14907	T100/2016	Cattle	88.57	0	SAT2	IV	None	None
14937	T138/2016	Cattle	88.53	0	SAT2	IV	None	None
FMDV VP1 Prototype Sequences*								
9892	KEN/11/2009	Cattle	85.07	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	84.32	0	SAT2	IV	None	None
13804	SA/106/59		81.08	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	79.18	0	SAT2	I	None	None
19174	ZIM/7/83	Cattle	77.25	0	SAT2	II	None	None
5058	EGY/3/2012	Cattle	73.05	0	SAT2	VII	Ghb-12	None

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

Virus sample: KEN/11/2025

Sample details

Reception Date:	2025-11-07
Sender reference:	K20/25
Location of origin:	Sirikwa, Nakuru
Country of origin:	Kenya
Date of collection:	2025-02-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	IV
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-11-20
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
9992	KEN/19/2017	Bovine	94.99	0	SAT2	IV	None	None
659224	KEN/13/2021	Cattle	94.05	0	SAT2	IV	None	None
659225	KEN/14/2021	Cattle	94.05	0	SAT2	IV	None	None
10229	Ken/MMB37/2012	African Buffalo	92.33	1	SAT2	IV	None	None
9652	K13/02	Cattle	88.32	0	SAT2	IV	None	None
15149	TAN/43/2009	Cattle	88.04	0	SAT2	IV	None	None
10122	KEN/5/99		88.03	0	SAT2	IV	None	None
10201	KEN/9/99		88.01	0	SAT2	IV	None	None
4011	BUN/6/99	Cattle	87.85	0	SAT2	IV	None	None
9996	KEN/2/2002	Cattle	87.85	0	SAT2	IV	None	None
FMDV VP1 Prototype Sequences*								
9839	KEN/1/84	Cattle	85.09	0	SAT2	IV	None	None
9892	KEN/11/2009	Cattle	84.91	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	84.42	0	SAT2	IV	None	None
13804	SA/106/59		81.08	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	78.42	0	SAT2	I	None	None
19174	ZIM/7/83	Cattle	76.62	0	SAT2	II	None	None
5058	EGY/3/2012	Cattle	73.68	0	SAT2	VII	Ghb-12	None
10642	LIB/39/2012	Cattle	72.33	0	SAT2	VII	Lib-12	None

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

Virus sample: KEN/15/2025

Sample details

Reception Date:	2025-11-07
Sender reference:	K30/25
Location of origin:	Kamuriuki, Tharakanithi
Country of origin:	Kenya
Date of collection:	2025-02-25
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	IV
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-11-20
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
9992	KEN/19/2017	Bovine	95.15	0	SAT2	IV	None	None
659224	KEN/13/2021	Cattle	94.52	0	SAT2	IV	None	None
659225	KEN/14/2021	Cattle	94.52	0	SAT2	IV	None	None
10229	Ken/MMB37/2012	African Buffalo	92.80	1	SAT2	IV	None	None
9652	K13/02	Cattle	88.78	0	SAT2	IV	None	None
9996	KEN/2/2002	Cattle	88.32	0	SAT2	IV	None	None
10078	KEN/33/91	Bovine	88.32	0	SAT2	IV	None	None
10314	KEN_002/2002		88.32	0	SAT2	IV	None	None
10125	KEN/6/2004	Cattle	88.20	0	SAT2	IV	None	None
15149	TAN/43/2009	Cattle	88.20	0	SAT2	IV	None	None
FMDV VP1 Prototype Sequences*								
9892	KEN/11/2009	Cattle	85.69	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	84.58	0	SAT2	IV	None	None
19045	ZIM/14/2002	Bovine	79.15	0	SAT2	I	None	None
19174	ZIM/7/83	Cattle	76.94	0	SAT2	II	None	None
5058	EGY/3/2012	Cattle	73.52	0	SAT2	VII	Ghb-12	None
10642	LIB/39/2012	Cattle	72.64	0	SAT2	VII	Lib-12	None

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

Virus sample: KEN/26/2025

Sample details

Reception Date:	2025-11-07
Sender reference:	K47/25
Location of origin:	Kinanie, Machakos
Country of origin:	Kenya
Date of collection:	2025-06-10
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	IV
Lineage:	Ken-09
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-12-01
Sequence length:	642
Ambiguities:	0

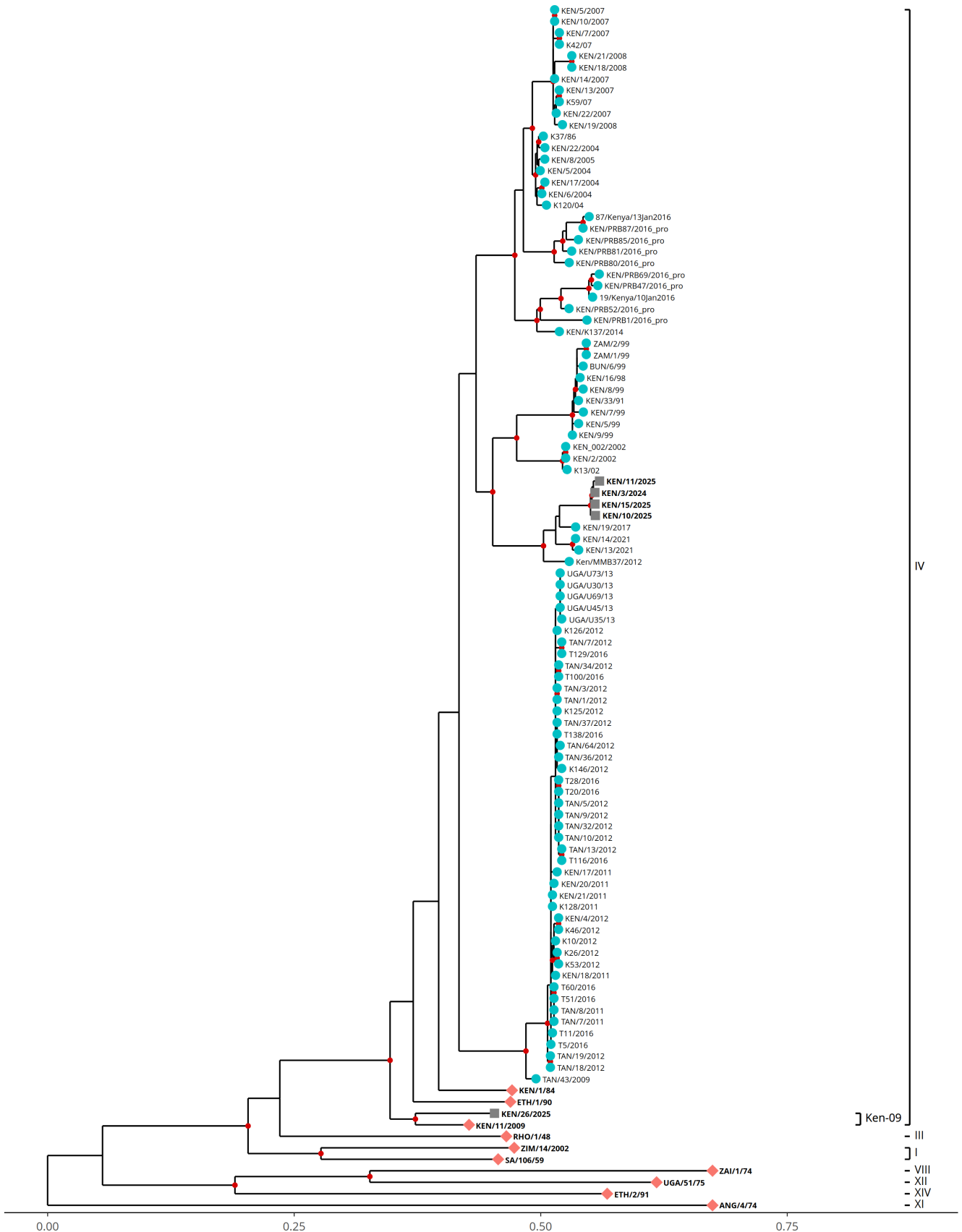
Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
9922	KEN/122/2009	Cattle	90.03	0	SAT2	IV	Ken-09	None
802	BAR/12/2012	Cattle	89.88	0	SAT2	IV	Ken-09	None
804	BAR/13/2012	Cattle	89.88	0	SAT2	IV	Ken-09	None
809	BAR/16/2012	Cattle	89.88	0	SAT2	IV	Ken-09	None
801	BAR/10/2012	Cattle	89.72	0	SAT2	IV	Ken-09	None
824	BAR/28/2012	Cattle	89.72	0	SAT2	IV	Ken-09	None
9934	KEN/13/2009	Cattle	89.56	0	SAT2	IV	Ken-09	None
855464	67/Kenya/13Jan2016	Bovine	86.62	0	SAT2	IV	None	None
10152	KEN/7/2005	Cattle	86.47	0	SAT2	IV	None	None
10268	KEN/PRB50/2016_pro	African Buffalo	86.47	0	SAT2	IV	None	None
FMDV VP1 Prototype Sequences*								
9892	KEN/11/2009	Cattle	90.34	0	SAT2	IV	Ken-09	None
9839	KEN/1/84	Cattle	85.67	0	SAT2	IV	None	None

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

Tree

Uploaded sequence
 Database sequence
 Reference sequence



Analysis Parameters

Query sequence set: WRLFMD/2025/000017
Number of related sequences reported: 90
Number of prototype sequences in tree: 10
Minimal VP1 subsequence match length: 610
Sequence alignment length: 650

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
KEN/20/2011	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/21/2008	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/21/2011	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/22/2004	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/22/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/33/91 *	AY343950	Bovine	OVI	Kenya	SAT2/IV	None
KEN/4/2012	None	Bovine	WRLFMD	Kenya	SAT2/IV	None
KEN/5/2004	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/5/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/5/99 *	AF367131		OVI	Kenya	SAT2/IV	12771430
KEN/6/2004	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/7/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/7/99 *	AF367132		OVI	Kenya	SAT2/IV	12771430
KEN/8/2005	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/8/99 *	DQ009729		OVI	Kenya	SAT2/IV	None
KEN/9/99 *	AF367133		OVI	Kenya	SAT2/IV	12771430
KEN/K137/2014 *	MN116692	Bovine	PIADC	Kenya	SAT2/IV	None
Ken/MMB37/2012 *	KP263447	African Buffalo	EMBAKASI	Kenya	SAT2/IV	25644407
KEN/PRB1/2016_pro *	MH882614	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB47/2016_pro *	MH882635	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB52/2016_pro *	MH882638	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB69/2016_pro *	MH882651	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB80/2016_pro *	MH882657	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB81/2016_pro *	MH882658	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB85/2016_pro *	MH882660	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN/PRB87/2016_pro *	MH882662	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN_002/2002 *	JF749861		PIADC	Kenya	SAT2/IV	23380590
T100/2016 *	MH917298	Cattle	PAU	Tanzania	SAT2/IV	None
T11/2016 *	MH921972	Cattle	PAU	Tanzania	SAT2/IV	None
T116/2016 *	MH917308	Cattle	PAU	Tanzania	SAT2/IV	None
T129/2016 *	MH921966	Cattle	PAU	Tanzania	SAT2/IV	None
T138/2016 *	MH921964	Cattle	PAU	Tanzania	SAT2/IV	None
T20/2016 *	MH917302	Cattle	PAU	Tanzania	SAT2/IV	None
T28/2016 *	MH921967	Cattle	PAU	Tanzania	SAT2/IV	None
T5/2016 *	MH917305	Cattle	PAU	Tanzania	SAT2/IV	None
T51/2016 *	MH921962	Cattle	PAU	Tanzania	SAT2/IV	None
T60/2016 *	MH921963	Cattle	PAU	Tanzania	SAT2/IV	None
TAN/1/2012	MF592602	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/10/2012	MF592607	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/13/2012	MF592610	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/18/2012	MF592614	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/19/2012	MF592615	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/3/2012	MF592603	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/32/2012	MF592619	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/34/2012	MF592620	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/36/2012	MF592621	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/37/2012	MF592622	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/43/2009	KF561727	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/5/2012	KM268900	Cattle	WRLFMD	Tanzania	SAT2/IV	25269623
TAN/64/2012	MF592634	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/7/2011	MF592600	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/7/2012	MF592605	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/8/2011	MF592601	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/9/2012	MF592606	Cattle	WRLFMD	Tanzania	SAT2/IV	None
UGA/U30/13 *	KP089986	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U35/13 *	KP089987	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U45/13 *	KP089988	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U69/13 *	KP089989	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U73/13 *	KP089990	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
ZAM/1/99	None		WRLFMD	Zambia	SAT2/IV	None
ZAM/2/99	None		WRLFMD	Zambia	SAT2/IV	None
BUN/6/99	None	Cattle	WRLFMD	Burundi	SAT2/IV	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
KEN/13/2021	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/14/2021	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
19/Kenya/10Jan2016 *	OM562552	Bovine	KSU	Kenya	SAT2/IV	None
87/Kenya/13Jan2016 *	OM562599	Bovine	KSU	Kenya	SAT2/IV	None
K10/2012 *	KP263454	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K120/04 *	HM623700	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
K125/2012 *	KP263449	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K126/2012 *	KP263450	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K128/2011 *	KP263456	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K13/02 *	HM623699	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
K146/2012 *	KP263448	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K26/2012 *	KP263452	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K37/86 *	HM623686	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
K42/07 *	HM623707	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
K46/2012 *	KP263455	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K53/2012 *	KP263451	Cattle	EMBAKASI	Kenya	SAT2/IV	25644407
K59/07 *	HM623708	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
KEN/10/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/13/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/14/2007	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/16/98 *	AY343962	Bovine	OVI	Kenya	SAT2/IV	None
KEN/17/2004	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/17/2011	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/18/2008	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/18/2011	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/19/2008	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/19/2017	None	Bovine	WRLFMD	Kenya	SAT2/IV	None
KEN/2/2002	None	Cattle	WRLFMD	Kenya	SAT2/IV	None

* Not a WRLFMD Reference Number;

^ Not Available