

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

Genotyping Report

FMDV serotype: A
Country: Kenya
Year: 2021
Batch: WRLFMD/2021/00010
No. of sequences: 1
Report date: 24th August 2021
Report generated by: Nick Knowles
Report checked by: Hayley Hicks



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

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Virus sample name:	KEN/10/2021
Sender reference:	K42/21
Location of origin:	Kitui
Country of origin:	Kenya
Date of collection:	11/03/2021
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-I
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	25/07/2021
Primers:	A-1C562F/EUR-2B52R
Received for sequencing:	12/08/2021
Created:	24/08/2021
Last updated:	24/08/2021
VIBASys IDs: sample 48566, genome 48567, sequence viba_48568, sequencing info 48569	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_37385	KEN/9/2017	bovine	93.7	0	A	AFRICA	G-I	
viba_21278	TAN/16/2013	cattle	93.5	0	A	AFRICA	G-I	
viba_21282	TAN/18/2013	cattle	93.5	0	A	AFRICA	G-I	
viba_10489	KEN/28/2008	cattle	92.7	0	A	AFRICA	G-I	
viba_11314	K73/08	cattle	92.7	0	A	AFRICA	G-I	
viba_37393	KEN/17/2017	bovine	92.7	0	A	AFRICA	G-I	
viba_12054	TAN/4/2009	cattle	92.6	0	A	AFRICA	G-I	
viba_12074	TAN/47/2009	cattle	92.4	0	A	AFRICA	G-I	
viba_12070	TAN/45/2009	cattle	92.4	0	A	AFRICA	G-I	
viba_12062	TAN/11/2009	cattle	92.4	0	A	AFRICA	G-I	

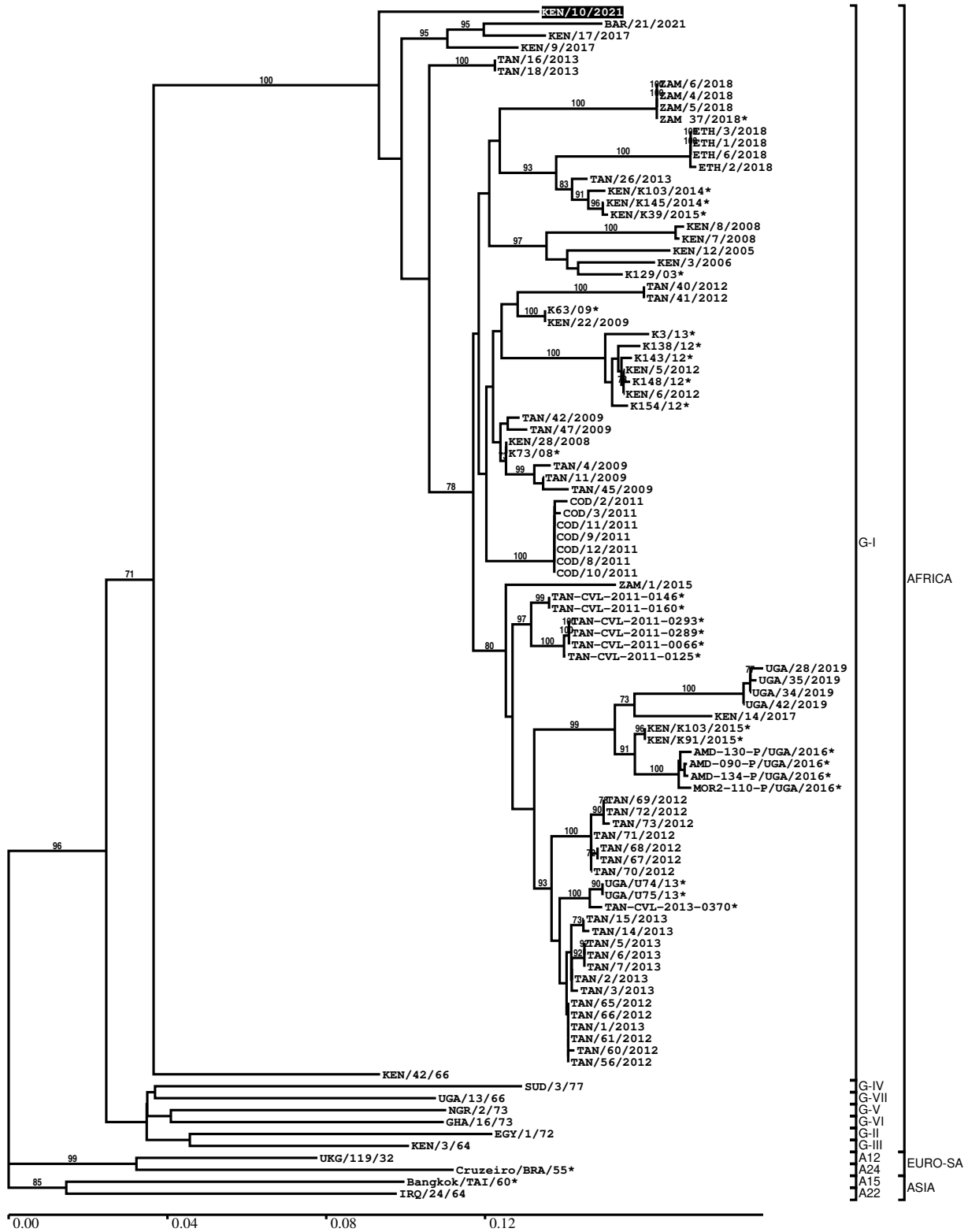
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_347	KEN/42/66		85.5	0	A	AFRICA	G-I	
viba_785	KEN/3/64		84.0	0	A	AFRICA	G-III	
viba_173	UGA/13/66	bovine	83.2	0	A	AFRICA	G-VII	
viba_609	GHA/16/73	bovine	82.3	0	A	AFRICA	G-VI	
viba_535	NGR/2/73	bovine	82.2	0	A	AFRICA	G-V	
viba_688	EGY/1/72	bovine	81.6	0	A	AFRICA	G-II	
viba_178	SUD/3/77		80.8	0	A	AFRICA	G-IV	
viba_589	Bangkok/TAI/60		80.2	0	A	ASIA	A15	
viba_699	UKG/119/32		79.8	0	A	EURO-SA	A12	
viba_217	Cruzeiro/BRA/55	bovine	79.7	0	A	EURO-SA	A24	

Report on FMDV A in Kenya in 2021

Batch: WRLFMD/2021/00010



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2021/00010-Kenya-A (1 sequences)
Sequence database set:	allseqs_A (2273 sequences)
Prototype sequence set:	!prototypes_A (40 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	633
Phylogeny reconstruction method:	fdnadist, fneighbor
Number of bootstrap samples:	1000
Random seed for bootstrapping:	1
Displaying bootstrap values above:	70.0%
Number of sequences in tree capped at:	100
Number of prototype sequences in tree:	10
VIBASys version:	reflabs-1.1.2

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/A

label	accession	host(s)	lab	country	taxonomic information
KEN/10/2021	n/a	cattle	WRLFMD	Kenya	AFRICA/G-I
BAR/21/2021	n/a	cattle	WRLFMD	Bahrain	AFRICA/G-I
KEN/17/2017	n/a	bovine	WRLFMD	Kenya	AFRICA/G-I
KEN/9/2017	n/a	bovine	WRLFMD	Kenya	AFRICA/G-I
TAN/16/2013	MF592653	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/18/2013	MF592654	cattle	WRLFMD	Tanzania	AFRICA/G-I
ZAM/6/2018	n/a	cattle	WRLFMD	Zambia	AFRICA/G-I
ZAM/4/2018	n/a	cattle	WRLFMD	Zambia	AFRICA/G-I
ZAM/5/2018	n/a	cattle	WRLFMD	Zambia	AFRICA/G-I
ZAM 37/2018*	n/a	bovine	BVI	Zambia	AFRICA/G-I
ETH/3/2018	MN987503	cattle	WRLFMD	Ethiopia	AFRICA/G-I
ETH/1/2018	MN987501	cattle	WRLFMD	Ethiopia	AFRICA/G-I
ETH/6/2018	MN987504	cattle	WRLFMD	Ethiopia	AFRICA/G-I
ETH/2/2018	MN987502	cattle	WRLFMD	Ethiopia	AFRICA/G-I
TAN/26/2013	MF592660	cattle	WRLFMD	Tanzania	AFRICA/G-I
KEN/K103/2014*	MH882571	cattle	PIADC	Kenya	AFRICA/G-I
KEN/K145/2014*	MH882569	cattle	PIADC	Kenya	AFRICA/G-I
KEN/K39/2015*	MH882570	cattle	PIADC	Kenya	AFRICA/G-I
KEN/8/2008	KF561701	cattle	WRLFMD	Kenya	AFRICA/G-I
KEN/7/2008	KF561700	cattle	WRLFMD	Kenya	AFRICA/G-I
KEN/12/2005	n/a	cattle	WRLFMD	Kenya	AFRICA/G-I
KEN/3/2006	n/a	cattle	WRLFMD	Kenya	AFRICA/G-I
K129/03*	KJ440868	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
TAN/40/2012	MF592625	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/41/2012	MF592626	cattle	WRLFMD	Tanzania	AFRICA/G-I
K63/09*	KJ440871	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
KEN/22/2009	KF561703	cattle	WRLFMD	Kenya	AFRICA/G-I
K3/13*	KJ440876	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
K138/12*	KJ440872	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
K143/12*	KJ440873	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
KEN/5/2012	n/a	bovine	WRLFMD	Kenya	AFRICA/G-I
K148/12*	KJ440874	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
KEN/6/2012	n/a	bovine	WRLFMD	Kenya	AFRICA/G-I
K154/12*	KJ440875	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
TAN/42/2009	KF561695	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/47/2009	KF561697	cattle	WRLFMD	Tanzania	AFRICA/G-I

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label	accession	host(s)	lab	country	taxonomic information
KEN/28/2008	KF561702	cattle	WRLFMD	Kenya	AFRICA/G-I
K73/08*	KJ440870	cattle	Embakasi/Lindholm	Kenya	AFRICA/G-I
TAN/4/2009	KF561692	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/11/2009	KF561694	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/45/2009	KF561696	cattle	WRLFMD	Tanzania	AFRICA/G-I
COD/2/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/3/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/11/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/9/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/12/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/8/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
COD/10/2011	n/a	cattle	WRLFMD	Democratic Republic of the Congo	AFRICA/G-I
ZAM/1/2015	n/a	bovine	WRLFMD	Zambia	AFRICA/G-I
TAN-CVL-2011-0146*	n/a	cattle	CVL-Tanzania	Tanzania	AFRICA/G-I
TAN-CVL-2011-0160*	n/a	bovine	CVL	Tanzania	AFRICA/G-I
TAN-CVL-2011-0293*	n/a	bovine	CVL	Tanzania	AFRICA/G-I
TAN-CVL-2011-0289*	n/a	bovine	CVL	Tanzania	AFRICA/G-I
TAN-CVL-2011-0066*	n/a	bovine	CVL	Tanzania	AFRICA/G-I
TAN-CVL-2011-0125*	n/a	bovine	CVL	Tanzania	AFRICA/G-I
UGA/28/2019	n/a	bovine	WRLFMD	Uganda	AFRICA/G-I
UGA/35/2019	n/a	bovine	WRLFMD	Uganda	AFRICA/G-I
UGA/34/2019	n/a	bovine	WRLFMD	Uganda	AFRICA/G-I
UGA/42/2019	n/a	bovine	WRLFMD	Uganda	AFRICA/G-I
KEN/14/2017	n/a	bovine	WRLFMD	Kenya	AFRICA/G-I
KEN/K103/2015*	MH882572	cattle	PIADC	Kenya	AFRICA/G-I
KEN/K91/2015*	MH882568	cattle	PIADC	Kenya	AFRICA/G-I
AMD-130-P/UGA/2016*	MH367470	cattle	PIADC	Uganda	AFRICA/G-I
AMD-090-P/UGA/2016*	MH367469	cattle	PIADC	Uganda	AFRICA/G-I
AMD-134-P/UGA/2016*	MH367471	cattle	PIADC	Uganda	AFRICA/G-I
MOR2-110-P/UGA/2016*	MH367468	cattle	PIADC	Uganda	AFRICA/G-I
TAN/69/2012	MF592639	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/72/2012	MF592642	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/73/2012	MF592643	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/71/2012	MF592641	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/68/2012	MF592638	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/67/2012	MF592637	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/70/2012	MF592640	cattle	WRLFMD	Tanzania	AFRICA/G-I
UGA/U74/13*	KP089984	bovine	Makerere University	Uganda	AFRICA/G-I
UGA/U75/13*	KP089985	bovine	Makerere University	Uganda	AFRICA/G-I
TAN-CVL-2013-0370*	n/a	cattle	CVL-Tanzania	Tanzania	AFRICA/G-I
TAN/15/2013	MF592652	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/14/2013	MF592651	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/5/2013	MF592648	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/6/2013	n/a	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/7/2013	MF592649	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/2/2013	MF592646	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/3/2013	MF592647	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/65/2012	MF592635	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/66/2012	MF592636	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/1/2013	MF592645	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/61/2012	MF592633	cattle	WRLFMD	Tanzania	AFRICA/G-I

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label	accession	host(s)	lab	country	taxonomic information
TAN/60/2012	MF592632	cattle	WRLFMD	Tanzania	AFRICA/G-I
TAN/56/2012	MF592631	cattle	WRLFMD	Tanzania	AFRICA/G-I
KEN/42/66	KF561699	n/a	WRLFMD	Kenya	AFRICA/G-I
SUD/3/77	GU566064	n/a	WRLFMD	Sudan	AFRICA/G-IV
UGA/13/66	KF561705	bovine	WRLFMD	Uganda	AFRICA/G-VII
NGR/2/73	KF561704	bovine	WRLFMD	Niger	AFRICA/G-V
GHA/16/73	KF561698	bovine	WRLFMD	Ghana	AFRICA/G-VI
EGY/1/72	EF208756	bovine	WRLFMD	Egypt	AFRICA/G-II
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III
UKG/119/32	M10975	n/a	PIADC	United Kingdom	EURO-SA/A12
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
Bangkok/TAI/60*	AY593755	n/a	PIADC	Thailand	ASIA/A15
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22

*, not a WRLFMD Reference Number

n/a, not available