

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

Genotyping Report

FMDV serotype: SAT2
Country: Kenya
Year: 2017
Batch: WRLFMD/2018/00023
No. of sequences: 1
Report date: 24th September 2018
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska



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

email: reporting@pirbright.ac.uk

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Virus sample name:	KEN/19/2017
Sender reference:	K69/17
Location of origin:	Rongai, Nakuru
Country of origin:	Kenya
Date of collection:	25/11/2017
Host species:	bovine
Serotype:	SAT2
Topotype:	IV
Lineage:	
Sublineage:	
Sequence length:	639
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	06/09/2018
Primers:	SAT2-1C445F/SAT-2B208R; SAT2-P1-1223F/SAT-2B208R; FMD-3161F/FMD-4303R
Received for sequencing:	17/09/2018
Created:	24/09/2018
Last updated:	24/09/2018
VIBASys IDs: sample 37411, genome 37412, sequence viba_37413, sequencing info 37414	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35017	Ken/MMB37/2012	African buffalo	94.2	1	SAT2	IV		
viba_6484	KEN/6/2004	cattle	89.3	0	SAT2	IV		
viba_6507	KEN/17/2004	cattle	89.0	0	SAT2	IV		
viba_8089	KEN/8/2005	cattle	89.0	0	SAT2	IV		
viba_28871	K37/86		88.8	0	SAT2	IV		
viba_6480	KEN/5/2004	cattle	88.8	0	SAT2	IV		
viba_6531	TAN/4/2004	cattle	88.6	0	SAT2	IV		
viba_6519	K120/04		88.6	0	SAT2	IV		
viba_6539	TAN/9/2004	cattle	88.6	0	SAT2	IV		
viba_28883	K13/87		88.6	0	SAT2	IV		

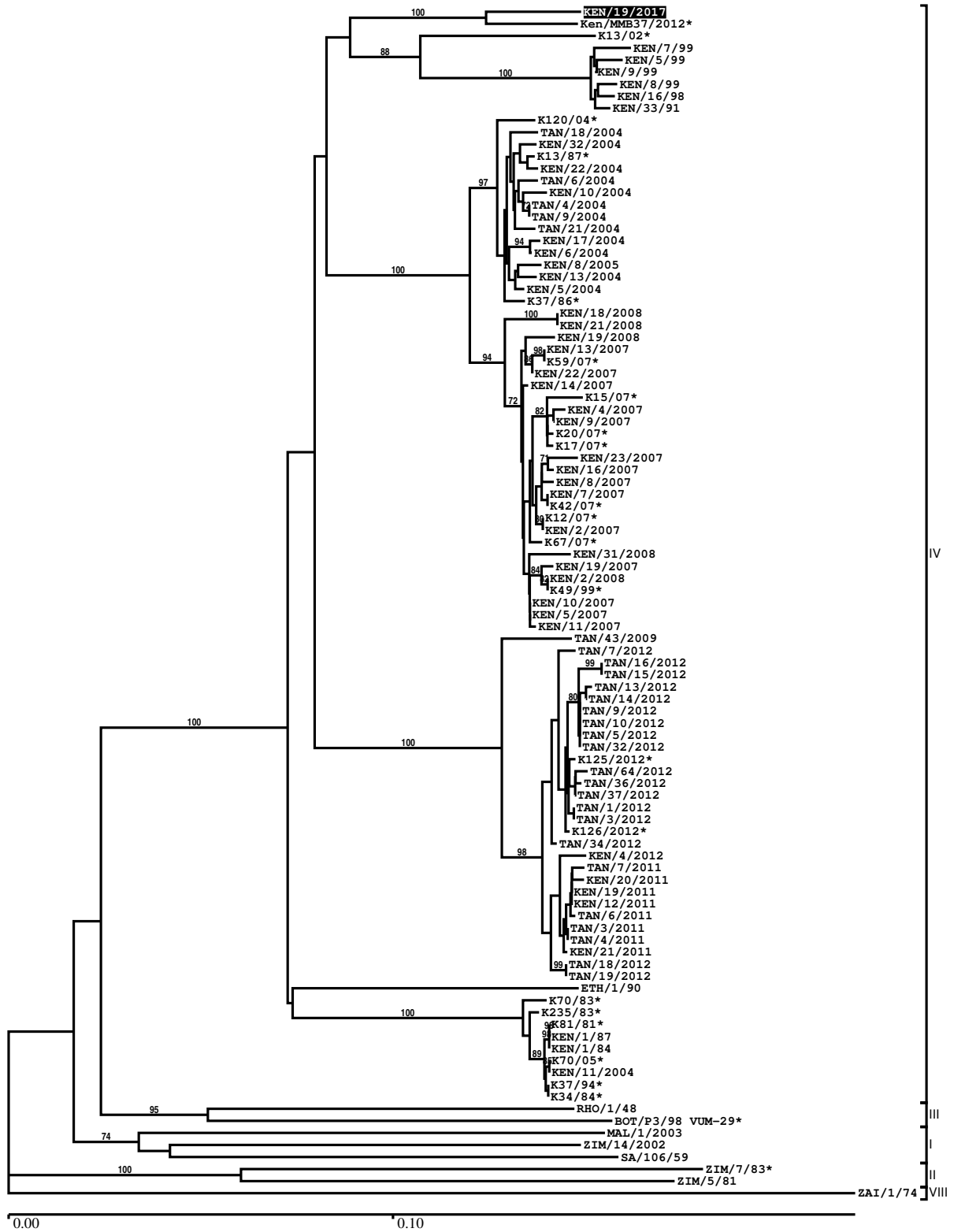
Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_248	KEN/1/84	bovine	86.5	0	SAT2	IV		
viba_273	ETH/1/90	bovine	85.1	0	SAT2	IV		
viba_752	SA/106/59		80.9	0	SAT2	I		
viba_380	RHO/1/48		79.0	0	SAT2	III		
viba_183	ZIM/14/2002	bovine	78.8	0	SAT2	I		
viba_111	MAL/1/2003	bovine	78.5	0	SAT2	I		
viba_451	BOT/P3/98 VUM-29	African buffalo	77.2	1	SAT2	III		
viba_567	ZIM/7/83	bovine	76.8	0	SAT2	II		
viba_546	ZIM/5/81	bovine	76.8	0	SAT2	II		
viba_374	ZAI/1/74		73.7	0	SAT2	VIII		

Report on FMDV SAT2 in Kenya in 2017

Batch: WRLFMD/2018/00023



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_SAT2
Query sequence set:	WRLFMD/2018/00023-Kenya-SAT2 (1 sequences)
Sequence database set:	allseqs_SAT2 (864 sequences)
Prototype sequence set:	!prototypes_SAT2 (25 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	642
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/SAT2

label	accession	host(s)	lab	country	taxonomic information
KEN/19/2017	n/a	bovine	WRLFMD	Kenya	IV
Ken/MMB37/2012*	KP263447	African buffalo	EMBAKASI	Kenya	IV
K13/02*	HM623699	n/a	n/a	Kenya	IV
KEN/7/99	AF367132	n/a	OVI	Kenya	IV
KEN/5/99	AF367131	n/a	OVI	Kenya	IV
KEN/9/99	AF367133	n/a	OVI	Kenya	IV
KEN/8/99	DQ009729	n/a	OVI	Kenya	IV
KEN/16/98	AY343962	n/a	OVI	Kenya	IV
KEN/33/91	AY343950	n/a	OVI	Kenya	IV
K120/04*	HM623700	n/a	n/a	Kenya	IV
TAN/18/2004	KF561725	cattle	WRLFMD	Tanzania	IV
KEN/32/2004	n/a	cattle	WRLFMD	Kenya	IV
K13/87*	HM623687	n/a	Makerere University	Kenya	IV
KEN/22/2004	n/a	cattle	WRLFMD	Kenya	IV
TAN/6/2004	KF561723	cattle	WRLFMD	Tanzania	IV
KEN/10/2004	n/a	cattle	WRLFMD	Kenya	IV
TAN/4/2004	KF561722	cattle	WRLFMD	Tanzania	IV
TAN/9/2004	KF561724	cattle	WRLFMD	Tanzania	IV
TAN/21/2004	KF561726	cattle	WRLFMD	Tanzania	IV
KEN/17/2004	n/a	cattle	WRLFMD	Kenya	IV
KEN/6/2004	n/a	cattle	WRLFMD	Kenya	IV
KEN/8/2005	n/a	cattle	WRLFMD	Kenya	IV
KEN/13/2004	n/a	cattle	WRLFMD	Kenya	IV
KEN/5/2004	n/a	cattle	WRLFMD	Kenya	IV
K37/86*	HM623686	n/a	Makerere University	Kenya	IV
KEN/18/2008	n/a	cattle	WRLFMD	Kenya	IV
KEN/21/2008	n/a	cattle	WRLFMD	Kenya	IV
KEN/19/2008	n/a	cattle	WRLFMD	Kenya	IV
KEN/13/2007	n/a	cattle	WRLFMD	Kenya	IV
K59/07*	HM623708	n/a	n/a	Kenya	IV
KEN/22/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/14/2007	n/a	cattle	WRLFMD	Kenya	IV
K15/07*	HM623704	n/a	n/a	Kenya	IV
KEN/4/2007	n/a	cattle	WRLFMD	Kenya	IV

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label	accession	host(s)	lab	country	taxonomic information
KEN/9/2007	n/a	cattle	WRLFMD	Kenya	IV
K20/07*	HM623706	n/a	n/a	Kenya	IV
K17/07*	HM623705	n/a	n/a	Kenya	IV
KEN/23/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/16/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/8/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/7/2007	n/a	cattle	WRLFMD	Kenya	IV
K42/07*	HM623707	n/a	n/a	Kenya	IV
K12/07*	HM623703	n/a	n/a	Kenya	IV
KEN/2/2007	n/a	cattle	WRLFMD	Kenya	IV
K67/07*	HM623709	n/a	n/a	Kenya	IV
KEN/31/2008	n/a	cattle	WRLFMD	Kenya	IV
KEN/19/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/2/2008	n/a	cattle	WRLFMD	Kenya	IV
K49/99*	HM623698	n/a	Makerere University	Kenya	IV
KEN/10/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/5/2007	n/a	cattle	WRLFMD	Kenya	IV
KEN/11/2007	n/a	cattle	WRLFMD	Kenya	IV
TAN/43/2009	KF561727	cattle	WRLFMD	Tanzania	IV
TAN/7/2012	MF592605	cattle	WRLFMD	Tanzania	IV
TAN/16/2012	MF592613	cattle	WRLFMD	Tanzania	IV
TAN/15/2012	MF592612	cattle	WRLFMD	Tanzania	IV
TAN/13/2012	MF592610	cattle	WRLFMD	Tanzania	IV
TAN/14/2012	MF592611	cattle	WRLFMD	Tanzania	IV
TAN/9/2012	MF592606	cattle	WRLFMD	Tanzania	IV
TAN/10/2012	MF592607	cattle	WRLFMD	Tanzania	IV
TAN/5/2012	MF592604	cattle	WRLFMD	Tanzania	IV
TAN/32/2012	MF592619	cattle	WRLFMD	Tanzania	IV
K125/2012*	KP263449	cattle	EMBAKASI	Kenya	IV
TAN/64/2012	MF592634	cattle	WRLFMD	Tanzania	IV
TAN/36/2012	MF592621	cattle	WRLFMD	Tanzania	IV
TAN/37/2012	MF592622	cattle	WRLFMD	Tanzania	IV
TAN/1/2012	MF592602	cattle	WRLFMD	Tanzania	IV
TAN/3/2012	MF592603	cattle	WRLFMD	Tanzania	IV
K126/2012*	KP263450	cattle	EMBAKASI	Kenya	IV
TAN/34/2012	MF592620	cattle	WRLFMD	Tanzania	IV
KEN/4/2012	n/a	bovine	WRLFMD	Kenya	IV
TAN/7/2011	MF592600	cattle	WRLFMD	Tanzania	IV
KEN/20/2011	n/a	cattle	WRLFMD	Kenya	IV
KEN/19/2011	n/a	cattle	WRLFMD	Kenya	IV
KEN/12/2011	n/a	cattle	WRLFMD	Kenya	IV
TAN/6/2011	MF592599	cattle	WRLFMD	Tanzania	IV
TAN/3/2011	MF592597	cattle	WRLFMD	Tanzania	IV
TAN/4/2011	MF592598	cattle	WRLFMD	Tanzania	IV
KEN/21/2011	n/a	cattle	WRLFMD	Kenya	IV
TAN/18/2012	MF592614	cattle	WRLFMD	Tanzania	IV
TAN/19/2012	MF592615	cattle	WRLFMD	Tanzania	IV
ETH/1/90	AY343935	bovine	OVI	Ethiopia	IV
K70/83*	HM623681	n/a	Makerere University	Kenya	IV
K235/83*	n/a	n/a	WRLFMD	Kenya	IV
K81/81*	HM623678	n/a	Makerere University	Kenya	IV
KEN/1/87	AY343944	n/a	OVI	Kenya	IV
KEN/1/84	AY344505	bovine	OVI	Kenya	IV
K70/05*	HM623701	n/a	n/a	Kenya	IV
KEN/11/2004	n/a	cattle	WRLFMD	Kenya	IV
K37/94*	HM623694	n/a	Makerere University	Kenya	IV
K34/84*	HM623684	n/a	Makerere University	Kenya	IV
RHO/1/48	AY593847	n/a	PIADC	Rhodesia	III
BOT/P3/98 VUM-29*	AF367124	African buffalo	OVI	Botswana	III
MAL/1/2003	n/a	bovine	WRLFMD	Malawi	I
ZIM/14/2002	KF219689	bovine	WRLFMD	Zimbabwe	I

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label	accession	host(s)	lab	country	taxonomic information
SA/106/59	AY593848	n/a	PIADC	South Africa (SA)	I
ZIM/7/83*	AF136607	bovine	OVI	Zimbabwe	II
ZIM/5/81	EF134951	bovine	WRLFMD	Zimbabwe	II
ZAI/1/74	DQ009737	n/a	OVI	Zaire	VIII

*, not a WRLFMD Reference Number

n/a, not available