

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

Genotyping Report

FMDV serotype: SAT2
Country: Zimbabwe
Year: 2017
Batch: WRLFMD/2017/00029
No. of sequences: 1
Report date: 9th November 2017
Report generated by: Kasia Bankowska
Report checked by: Nick Knowles



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

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Virus sample name:	ZIM/1/2017
Sender reference:	ZIM/17
Location of origin:	Hebron, Good Hope
Country of origin:	Zimbabwe
Date of collection:	2017
Host species:	cattle
Serotype:	SAT2
Topotype:	II
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	25/10/2017
Primers:	SAT2-1C445F/SAT-2B208R; SAT2-P1-1223F/SAT-2B208R
Received for sequencing:	30/10/2017
Created:	06/11/2017
Last updated:	06/11/2017
VIBASys IDs: sample 35215, genome 35216, sequence viba_35217, sequencing info 35218	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_32400	ZIM/1/2017	bovine	100.0	0	SAT2	II		
viba_25766	ZIM/13/2015	bovine	98.1	0	SAT2	II		
viba_16791	ZIM/4/2010	cattle	90.8	0	SAT2	II		
viba_16787	ZIM/2/2010	cattle	90.8	0	SAT2	II		
viba_25742	ZIM/1/2015	bovine	90.0	0	SAT2	II		
viba_29674	ZIM/23/2015	bovine	90.0	0	SAT2	II		
viba_25790	ZIM01/15a	cattle	90.0	0	SAT2	II		
viba_2067	ZIM/6/88/2	african buffalo	89.9	0	SAT2	II		
viba_2071	ZIM/7/88/2	african buffalo	89.9	0	SAT2	II		
viba_23692	ZIM/1/2014	bovine	89.9	0	SAT2	II		

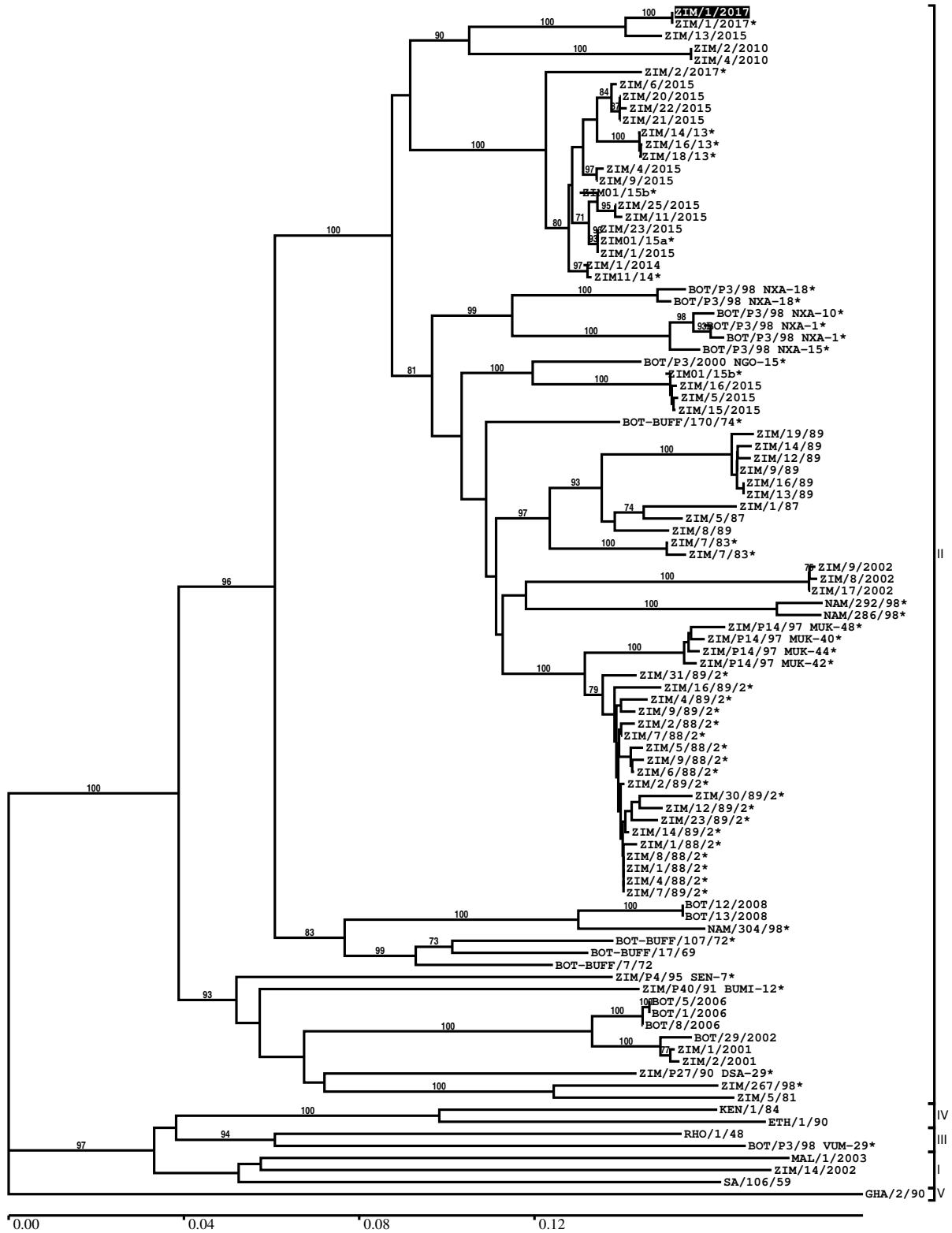
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_567	ZIM/7/83	bovine	87.5	0	SAT2	II		
viba_546	ZIM/5/81	bovine	81.4	0	SAT2	II		
viba_451	BOT/P3/98 VUM-29	african buffalo	76.9	1	SAT2	III		
viba_380	RHO/1/48		76.9	0	SAT2	III		
viba_248	KEN/1/84	bovine	76.5	0	SAT2	IV		
viba_752	SA/106/59		76.3	0	SAT2	I		
viba_111	MAL/1/2003	bovine	75.7	0	SAT2	I		
viba_273	ETH/1/90	bovine	75.4	0	SAT2	IV		
viba_183	ZIM/14/2002	bovine	75.1	0	SAT2	I		
viba_728	GHA/2/90	bovine	74.6	0	SAT2	V		

Report on FMDV SAT2 in Zimbabwe in 2017

Batch: WRLFMD/2017/00029



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_SAT2
Query sequence set:	WRLFMD/2017/00029-Zimbabwe-SAT2 (1 sequences)
Sequence database set:	allseqs_SAT2 (849 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
ZIM/1/2017	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/1/2017*	n/a	bovine	BVI	Zimbabwe	II
ZIM/13/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/2/2010	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/4/2010	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/2/2017*	n/a	bovine	BVI	Zimbabwe	II
ZIM/6/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/20/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/22/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/21/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/14/13*	n/a	bovine	BVI	Zimbabwe	II
ZIM/16/13*	n/a	bovine	BVI	Zimbabwe	II
ZIM/18/13*	n/a	bovine	BVI	Zimbabwe	II
ZIM/4/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/9/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM01/15b*	n/a	cattle	BVI	Zimbabwe	II
ZIM/25/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/11/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/23/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM01/15a*	n/a	cattle	BVI	Zimbabwe	II
ZIM/1/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/1/2014	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM11/14*	n/a	bovine	BVI	Zimbabwe	II
BOT/P3/98 NXA-18*	AF367123	african buffalo	OVI	Botswana	II
BOT/P3/98 NXA-18*	n/a	african buffalo	WRLFMD	Botswana	II
BOT/P3/98 NXA-10*	n/a	african buffalo	WRLFMD	Botswana	II
BOT/P3/98 NXA-1*	n/a	african buffalo	WRLFMD	Botswana	II
BOT/P3/98 NXA-1*	AF367122	african buffalo	OVI	Botswana	II
BOT/P3/98 NXA-15*	n/a	african buffalo	n/a	Botswana	II
BOT/P3/2000 NGO-15*	n/a	african buffalo	WRLFMD	Botswana	II
ZIM01/15b*	n/a	cattle	BVI	Zimbabwe	II
ZIM/16/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/5/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/15/2015	n/a	bovine	WRLFMD	Zimbabwe	II
BOT-BUFF/170/74*	n/a	african buffalo	WRLFMD	Botswana	II
ZIM/19/89	n/a	cattle	WRLFMD	Zimbabwe	II

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label	accession	host(s)	lab	country	taxonomic information
ZIM/14/89	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/12/89	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/9/89	KF112976	bovine	WRLFMD	Zimbabwe	II
ZIM/16/89	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/13/89	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/1/87	KF112973	bovine	WRLFMD	Zimbabwe	II
ZIM/5/87	KF112974	bovine	WRLFMD	Zimbabwe	II
ZIM/8/89	KF112975	bovine	WRLFMD	Zimbabwe	II
ZIM/7/83*	AF136607	bovine	OVI	Zimbabwe	II
ZIM/7/83*	DQ009726	bovine	OVI	Zimbabwe	II
ZIM/9/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/8/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/17/2002	n/a	bovine	WRLFMD	Zimbabwe	II
NAM/292/98*	AF367128	n/a	OVI	Namibia (NAM)	II
NAM/286/98*	AF367127	n/a	OVI	Namibia (NAM)	II
ZIM/P14/97 MUK-48*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/P14/97 MUK-40*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/P14/97 MUK-44*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/P14/97 MUK-42*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/31/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/16/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/4/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/9/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/2/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/7/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/5/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/9/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/6/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/2/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/30/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/12/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/23/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/14/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/1/88/2*	AF367108	african buffalo	OVI	Zimbabwe	II
ZIM/8/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/1/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/4/88/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/7/89/2*	n/a	african buffalo	WRLFMD	Zimbabwe	II
BOT/12/2008	n/a	cattle	WRLFMD	Botswana	II
BOT/13/2008	n/a	cattle	WRLFMD	Botswana	II
NAM/304/98*	AF367129	n/a	OVI	Namibia (NAM)	II
BOT-BUFF/107/72*	n/a	african buffalo	WRLFMD	Botswana	II
BOT-BUFF/17/69	n/a	african buffalo	WRLFMD	Botswana	II
BOT-BUFF/7/72	n/a	african buffalo	WRLFMD	Botswana	II
ZIM/P4/95 SEN-7*	n/a	n/a	WRLFMD	Zimbabwe	II
ZIM/P40/91 BUMI-12*	n/a	african buffalo	WRLFMD	Zimbabwe	II
BOT/5/2006	n/a	cattle	WRLFMD	Botswana	II
BOT/1/2006	n/a	cattle	WRLFMD	Botswana	II
BOT/8/2006	n/a	cattle	WRLFMD	Botswana	II
BOT/29/2002	n/a	bovine	WRLFMD	Botswana	II
ZIM/1/2001	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/2/2001	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/P27/90 DSA-29*	n/a	african buffalo	WRLFMD	Zimbabwe	II
ZIM/267/98*	AF367130	african buffalo	OVI	Zimbabwe	II
ZIM/5/81	EF134951	bovine	WRLFMD	Zimbabwe	II
KEN/1/84	AY344505	bovine	OVI	Kenya	IV
ETH/1/90	AY343935	bovine	OVI	Ethiopia	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
SA/106/59	AY593848	n/a	PIADC	South Africa (SA)	I
GHA/2/90	AF479415	bovine	OVI	Ghana	V

*, not a WRLFMD Reference Number
n/a, not available