

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

## Genotyping Report

FMDV serotype: SAT2  
Country: Mozambique  
Year: 2015  
Batch: WRLFMD/2016/00021  
No. of sequences: 1  
Report date: 2nd August 2016  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska

### Analysis Parameters

VP1 subsequence extractor: vp1\_SAT2  
Query sequence set: WRLFMD/2016/00021-Mozambique-SAT2 (1 sequences)  
Sequence database set: !allseqs\_SAT2 (816 sequences)  
Prototype sequence set: !prototypes\_SAT2 (25 sequences)  
Number of related sequences reported: 10  
Minimal VP1 subsequence match length: 600  
VIBASys version: reflabs-1.0.3



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

email: [reporting@pirbright.ac.uk](mailto:reporting@pirbright.ac.uk)

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Virus sample name:	MOZ/3/2015
Sender reference:	MOZ 01/15
Location of origin:	Mapulanguene, Magude, Maputo
Country of origin:	Mozambique
Date of collection:	11/06/2015
Host species:	bovine
Serotype:	SAT2
Topotype:	I
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	30/06/2016
Primers:	SAT2-1C445F/SAT-2B208R; SAT2-P1-1223F/SAT-2B208R
Received for sequencing:	25/07/2016
Created:	26/07/2016
Last updated:	26/07/2016
VIBASys IDs: sample 29662, genome 29663, sequence viba_29664, sequencing info 29665	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_25664	MOZ/1/2015	bovine	100.0	0	SAT2	I		
viba_25669	MOZ01/15	cattle	99.7	0	SAT2	I		
viba_23650	MOZ/1/2014	bovine	99.2	0	SAT2	I		
viba_23654	MOZ/2/2014	bovine	98.8	0	SAT2	I		
viba_23662	MOZ/4/2014	bovine	98.6	0	SAT2	I		
viba_23658	MOZ/3/2014	bovine	98.6	0	SAT2	I		
viba_23671	MOZ04/14	cattle	98.1	2	SAT2	I		
viba_23675	MOZ05/14	cattle	95.5	1	SAT2	I		
viba_23679	MOZ06/14	cattle	91.6	4	SAT2	I		
viba_27173	KNP/31/95	african buffalo	89.1	2	SAT2	I		

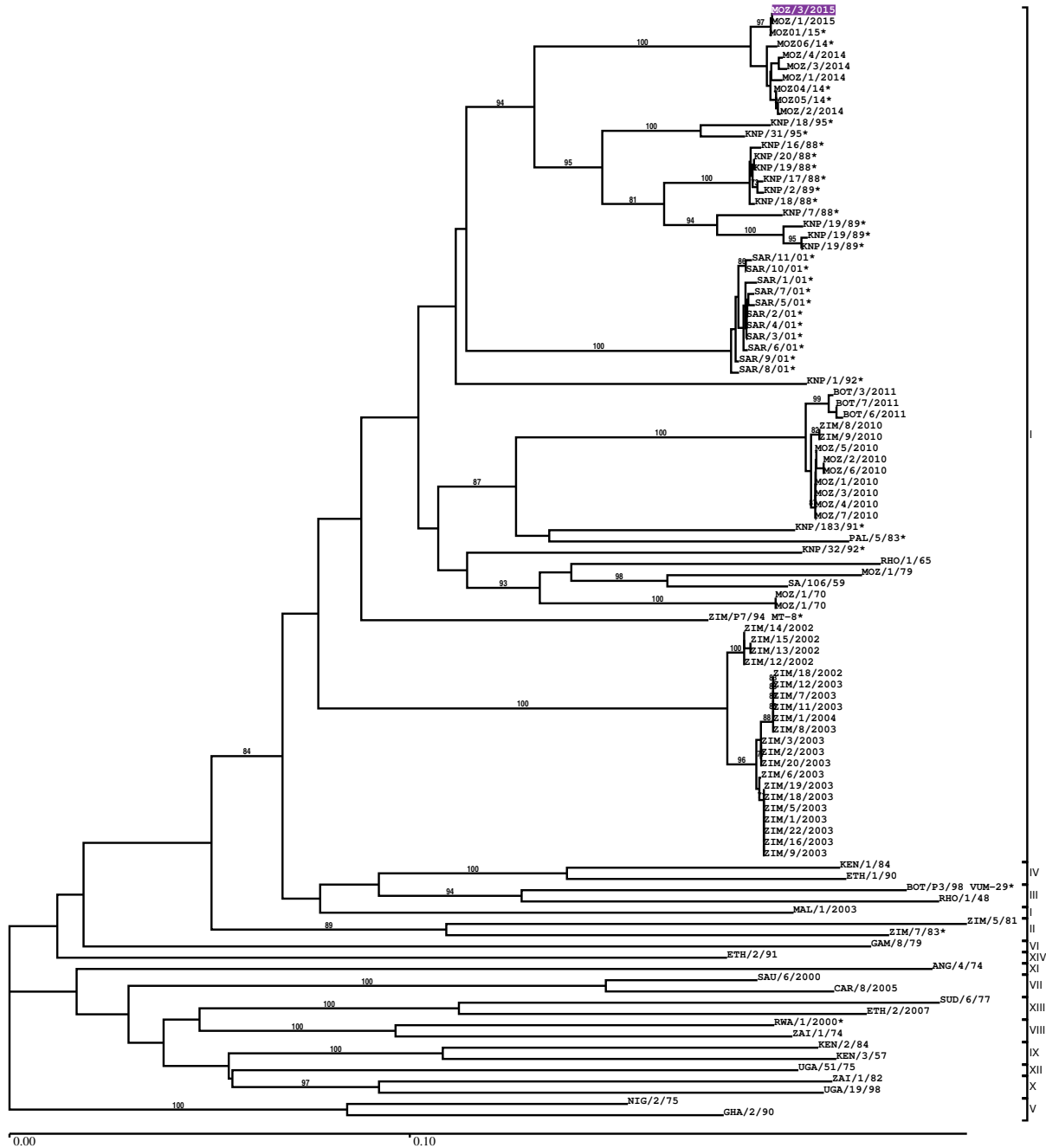
#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_752	SA/106/59		82.7	0	SAT2	I		
viba_183	ZIM/14/2002	bovine	82.6	0	SAT2	I		
viba_111	MAL/1/2003	bovine	80.5	0	SAT2	I		
viba_451	BOT/P3/98 VUM-29	african buffalo	79.1	1	SAT2	III		
viba_380	RHO/1/48		79.0	0	SAT2	III		
viba_248	KEN/1/84	bovine	78.8	0	SAT2	IV		
viba_273	ETH/1/90	bovine	78.7	0	SAT2	IV		
viba_567	ZIM/7/83	bovine	75.7	0	SAT2	II		
viba_546	ZIM/5/81	bovine	75.3	0	SAT2	II		
viba_500	NIG/2/75	bovine	73.9	0	SAT2	V		

Report on FMDV SAT2 in Mozambique in 2015

Batch: WRLFMD/2016/00021



Sequence alignment method: muscle (default parameters)  
 Phylogeny reconstruction method: fdnadist, fneighbor  
 Number of bootstrap samples: 1000  
 Displaying bootstrap values above: 70.0%  
 Number of sequences in tree capped at: 100  
 \*, not a WRLFMD Reference Number

## Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/SAT2

label	accession	host(s)	lab	country	taxonomic information
MOZ/3/2015	n/a	bovine	WRLFMD	Mozambique	I
MOZ/1/2015	n/a	bovine	WRLFMD	Mozambique	I
MOZ01/15*	n/a	cattle	BVI	Mozambique	I
MOZ06/14*	n/a	cattle	BVI	Mozambique	I
MOZ/4/2014	n/a	bovine	WRLFMD	Mozambique	I
MOZ/3/2014	n/a	bovine	WRLFMD	Mozambique	I
MOZ/1/2014	n/a	bovine	WRLFMD	Mozambique	I
MOZ04/14*	n/a	cattle	BVI	Mozambique	I
MOZ05/14*	n/a	cattle	BVI	Mozambique	I
MOZ/2/2014	n/a	bovine	WRLFMD	Mozambique	I
KNP/18/95*	AF367118	african buffalo	OVI	South Africa (KNP)	I
KNP/31/95*	AF367119	african buffalo	OVI	South Africa (KNP)	I
KNP/16/88*	AF367104	impala	OVI	South Africa (KNP)	I
KNP/20/88*	AF367107	impala	OVI	South Africa (KNP)	I
KNP/19/88*	AF367106	impala	OVI	South Africa (KNP)	I
KNP/17/88*	AF367105	impala	OVI	South Africa (KNP)	I
KNP/2/89*	AF367109	impala	OVI	South Africa (KNP)	I
KNP/18/88*	AF367138	impala	OVI	South Africa (KNP)	I
KNP/7/88*	AF367103	african buffalo	OVI	South Africa (KNP)	I
KNP/19/89*	DQ009735	african buffalo	OVI	South Africa (KNP)	I
KNP/19/89*	n/a	african buffalo	WRLFMD	South Africa (KNP)	I
KNP/19/89*	AF367110	african buffalo	OVI	South Africa (KNP)	I
SAR/11/01*	AY442913	n/a	OVI	Republic of South Africa	I
SAR/10/01*	AY442912	n/a	OVI	Republic of South Africa	I
SAR/1/01*	AY442903	n/a	OVI	Republic of South Africa	I
SAR/7/01*	AY442909	n/a	OVI	Republic of South Africa	I
SAR/5/01*	AY442907	n/a	OVI	Republic of South Africa	I
SAR/2/01*	AY442904	n/a	OVI	Republic of South Africa	I
SAR/4/01*	AY442906	n/a	OVI	Republic of South Africa	I
SAR/3/01*	AY442905	n/a	OVI	Republic of South Africa	I
SAR/6/01*	AY442908	n/a	OVI	Republic of South Africa	I
SAR/9/01*	AY442911	n/a	OVI	Republic of South Africa	I
SAR/8/01*	AY442910	n/a	OVI	Republic of South Africa	I
KNP/1/92*	AF367114	impala	OVI	South Africa (KNP)	I
BOT/3/2011	n/a	cattle	WRLFMD	Botswana	I
BOT/7/2011	n/a	cattle	WRLFMD	Botswana	I
BOT/6/2011	n/a	cattle	WRLFMD	Botswana	I
ZIM/8/2010	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/9/2010	n/a	bovine	WRLFMD	Zimbabwe	I
MOZ/5/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/2/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/6/2010	n/a	cattle	WRLFMD	Mozambique	I

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
MOZ/1/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/3/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/4/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/7/2010	n/a	n/a	WRLFMD	Mozambique	I
KNP/183/91*	AF367112	african buffalo	OVI	South Africa (KNP)	I
PAL/5/83*	AF367102	n/a	OVI	South Africa	I
KNP/32/92*	AF367115	african buffalo	OVI	South Africa (KNP)	I
RHO/1/65	n/a	n/a	WRLFMD	Rhodesia	I
MOZ/1/79	AF367137	n/a	OVI	Mozambique	I
SA/106/59	AY593848	n/a	PIADC	South Africa (SA)	I
MOZ/1/70	n/a	n/a	WRLFMD	Mozambique	I
MOZ/1/70	KF112959	n/a	WRLFMD	Mozambique	I
ZIM/P7/94 MT-8*	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/14/2002	KF219689	bovine	WRLFMD	Zimbabwe	I
ZIM/15/2002	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/13/2002	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/12/2002	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/18/2002	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/12/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/7/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/11/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/1/2004	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/8/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/3/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/2/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/20/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/6/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/19/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/18/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/5/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/1/2003	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/22/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/16/2003	n/a	n/a	WRLFMD	Zimbabwe	I
ZIM/9/2003	n/a	n/a	WRLFMD	Zimbabwe	I
KEN/1/84	AY344505	bovine	OVI	Kenya	IV
ETH/1/90	AY343935	bovine	OVI	Ethiopia	IV
BOT/P3/98 VUM-29*	AF367124	african buffalo	OVI	Botswana	III
RHO/1/48	AY593847	n/a	PIADC	Rhodesia	III
MAL/1/2003	n/a	bovine	WRLFMD	Malawi	I
ZIM/5/81	EF134951	bovine	WRLFMD	Zimbabwe	II
ZIM/7/83*	AF136607	bovine	OVI	Zimbabwe	II
GAM/8/79	AF479410	bovine	OVI	Gambia	VI
ETH/2/91	AY343938	bovine	OVI	Ethiopia	XIV
ANG/4/74	AF479417	n/a	OVI	Angola	XI
SAU/6/2000	AF367135	bovine	OVI	Saudi Arabia	VII
CAR/8/2005	JX570616	cattle	WRLFMD	Cameroon	VII
SUD/6/77	AY343939	n/a	OVI	Sudan	XIII
ETH/2/2007	FJ798161	cattle	WRLFMD	Ethiopia	XIII
RWA/1/2000*	AF367134	n/a	OVI	Rwanda	VIII
ZAI/1/74	DQ009737	n/a	OVI	Zaire	VIII
KEN/2/84	AY343941	bovine	OVI	Kenya	IX
KEN/3/57	AJ251473	n/a	WRLFMD	Kenya	IX
UGA/51/75	AY343963	bovine	OVI	Uganda	XII
ZAI/1/82	AF367100	bovine	OVI	Zaire	X
UGA/19/98	AY343969	n/a	OVI	Uganda	X
NIG/2/75	AF367139	bovine	OVI	Nigeria	V
GHA/2/90	AF479415	bovine	OVI	Ghana	V

\*, not a WRLFMD Reference Number

n/a, not available