



## FMD Genotyping Report

Lab Reference WRL batch Number: WRLFMD/2023/000107

Sender Details:

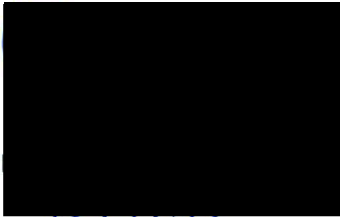


Date Received: 11/12/2023

Country of Origin\*: Mozambique

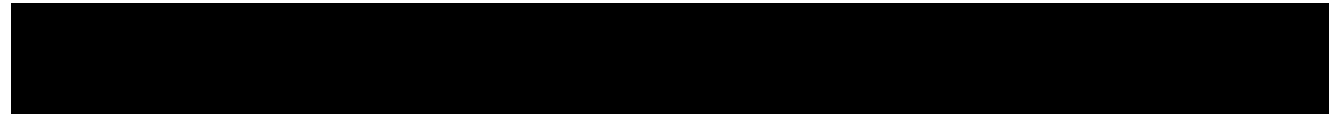
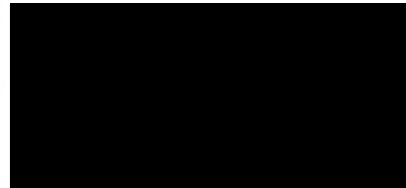
Work has now been completed in respect of the sequences recently submitted and the details are as attached. Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:



10/1/24

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](mailto:reflabsfeedback@pirbright.ac.uk)).

\* Data supplied by the customer

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

## Genotyping Report

FMDV serotype: SAT2  
Country: Mozambique  
Year: 2022  
Batch: WRLFMD/2023/000107  
No. of sequences: 1  
Report date: 25th January 2024  
Report generated by: Nick Knowles  
Report checked by: Jemma Wadsworth



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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/1/2022
Sender reference:	1
Location of origin:	Maputo
Country of origin:	Mozambique
Date of collection:	27/08/2022
Host species:	cattle
Serotype:	SAT2
Topotype:	II
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	16/01/2024
Primers:	SAT2-1C445F & SAT2-P1-1223F/SAT-2B208R; FMD-3161F/FMD-4303R
Received for sequencing:	22/01/2024
Created:	25/01/2024
Last updated:	25/01/2024
VIBASys IDs: sample 54873, genome 54874, sequence viba_54875, sequencing info 54876	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_3725	ZIM/P25/91 UR-3	African buffalo	88.6	0	SAT2	II		
viba_3728	ZIM/P25/91 UR-17	African buffalo	88.5	0	SAT2	II		
viba_3732	ZIM/P25/91 UR-34	African buffalo	88.3	0	SAT2	II		
viba_3702	ZIM/P25/91 UR-17	African buffalo	88.3	0	SAT2	II		
viba_3655	ZIM/P27/90 DSA-14	African buffalo	87.6	0	SAT2	II		
viba_3678	ZIM/P27/90 DSA-29	African buffalo	87.4	0	SAT2	II		
viba_3666	ZIM/P27/90 DSA-14	African buffalo	87.2	0	SAT2	II		
viba_3663	ZIM/P27/90 DSA-12	African buffalo	87.1	0	SAT2	II		
viba_3674	ZIM/P27/90 DSA-20	African buffalo	86.6	0	SAT2	II		
viba_546	ZIM/5/81	bovine	85.5	0	SAT2	II		

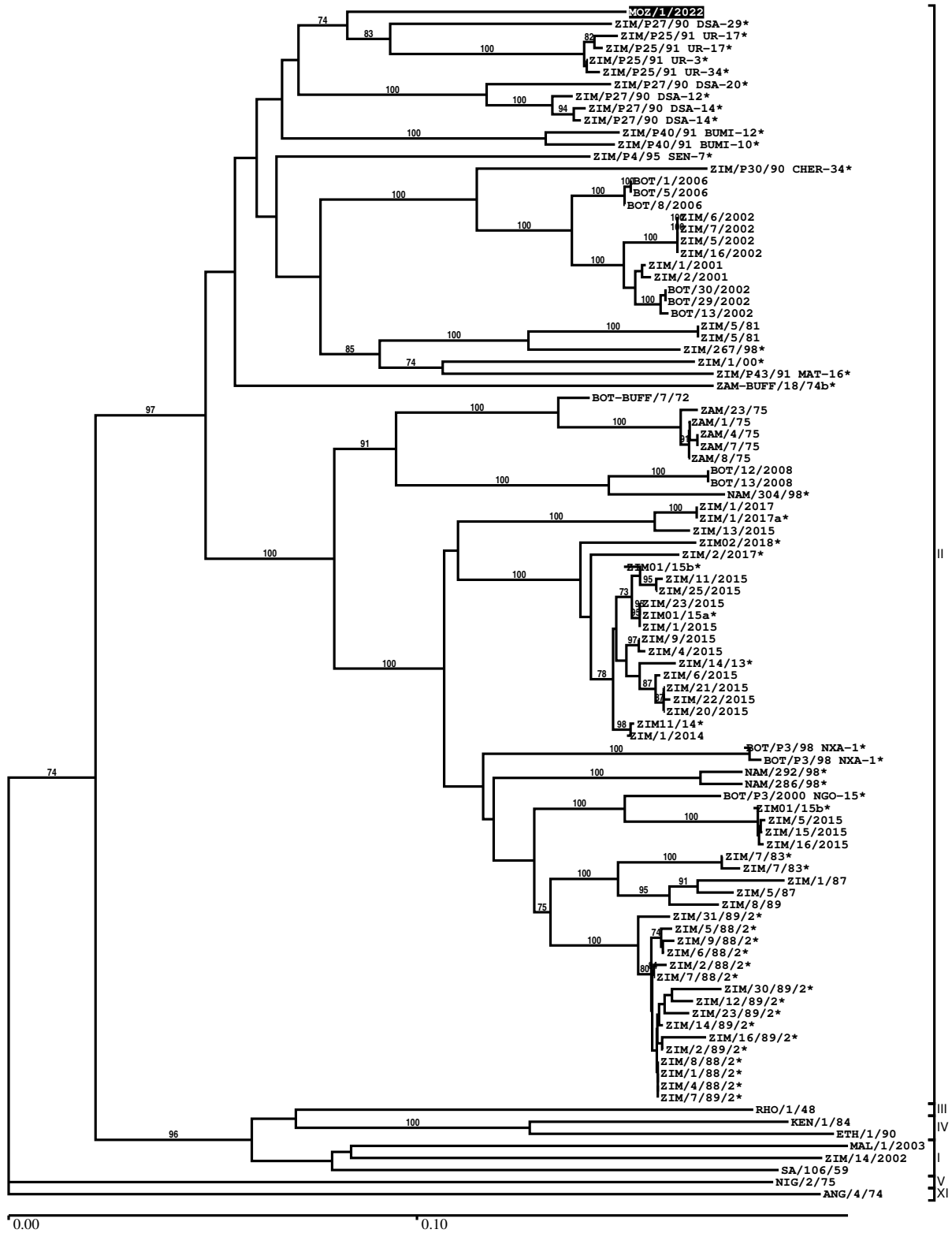
### Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_546	ZIM/5/81	bovine	85.5	0	SAT2	II		
viba_567	ZIM/7/83	bovine	81.3	0	SAT2	II		
viba_248	KEN/1/84	bovine	78.2	0	SAT2	IV		
viba_380	RHO/1/48		77.3	0	SAT2	III		
viba_273	ETH/1/90	bovine	76.9	0	SAT2	IV		
viba_111	MAL/1/2003	bovine	76.9	0	SAT2	I		
viba_183	ZIM/14/2002	bovine	76.8	0	SAT2	I		
viba_752	SA/106/59		76.3	0	SAT2	I		
viba_642	ANG/4/74		75.5	0	SAT2	XI		
viba_500	NIG/2/75	bovine	75.2	0	SAT2	V		

Report on FMDV SAT2 in Mozambique in 2022

Batch: WRLFMD/2023/000107



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_SAT2
Query sequence set:	WRLFMD/2023/000107-Mozambique-SAT2 (1 sequences)
Sequence database set:	allseqs_SAT2 (1191 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
MOZ/1/2022	n/a	cattle	WRLFMD	Mozambique	II
ZIM/P27/90 DSA-29*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P25/91 UR-17*	DQ009727	African buffalo	OVI	Zimbabwe	II
ZIM/P25/91 UR-17*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P25/91 UR-3*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P25/91 UR-34*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P27/90 DSA-20*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P27/90 DSA-12*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P27/90 DSA-14*	DQ009728	African buffalo	OVI	Zimbabwe	II
ZIM/P27/90 DSA-14*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P40/91 BUMI-12*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P40/91 BUMI-10*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P4/95 SEN-7*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/P30/90 CHER-34*	n/a	African buffalo	WRLFMD	Zimbabwe	II
BOT/1/2006	n/a	cattle	WRLFMD	Botswana	II
BOT/5/2006	n/a	cattle	WRLFMD	Botswana	II
BOT/8/2006	n/a	cattle	WRLFMD	Botswana	II
ZIM/6/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/7/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/5/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/16/2002	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/1/2001	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/2/2001	n/a	bovine	WRLFMD	Zimbabwe	II
BOT/30/2002	n/a	bovine	WRLFMD	Botswana	II
BOT/29/2002	n/a	bovine	WRLFMD	Botswana	II
BOT/13/2002	n/a	n/a	WRLFMD	Botswana	II
ZIM/5/81	KF112972	bovine	WRLFMD	Zimbabwe	II
ZIM/5/81	EF134951	bovine	WRLFMD	Zimbabwe	II
ZIM/267/98*	AF367130	African buffalo	OVI	Zimbabwe	II
ZIM/1/00*	AF367136	African buffalo	OVI	Zimbabwe	II
ZIM/P43/91 MAT-16*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZAM-BUFF/18/74b*	n/a	African buffalo	WRLFMD	Zambia	II
BOT-BUFF/7/72	n/a	African buffalo	WRLFMD	Botswana	II
ZAM/23/75	n/a	cattle	WRLFMD	Zambia	II
ZAM/1/75	n/a	bovine	WRLFMD	Zambia	II
ZAM/4/75	n/a	bovine	WRLFMD	Zambia	II

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
ZAM/7/75	n/a	bovine	WRLFMD	Zambia	II
ZAM/8/75	n/a	bovine	WRLFMD	Zambia	II
BOT/12/2008	n/a	cattle	WRLFMD	Botswana	II
BOT/13/2008	n/a	cattle	WRLFMD	Botswana	II
NAM/304/98*	AF367129	African buffalo	OVI	Namibia (NAM)	II
ZIM/1/2017	n/a	cattle	WRLFMD	Zimbabwe	II
ZIM/1/2017a*	n/a	bovine	BVI	Zimbabwe	II
ZIM/13/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM02/2018*	n/a	bovine	BVI	Zimbabwe	II
ZIM/2/2017*	n/a	bovine	BVI	Zimbabwe	II
ZIM01/15b*	n/a	cattle	BVI	Zimbabwe	II
ZIM/11/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/25/2015	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/9/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/4/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/14/13*	n/a	bovine	BVI	Zimbabwe	II
ZIM/6/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/21/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/22/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/20/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM11/14*	n/a	bovine	BVI	Zimbabwe	II
ZIM/1/2014	n/a	bovine	WRLFMD	Zimbabwe	II
BOT/P3/98 NXA-1*	n/a	African buffalo	WRLFMD	Botswana	II
BOT/P3/98 NXA-1*	AF367122	African buffalo	OVI	Botswana	II
NAM/292/98*	AF367128	African buffalo	OVI	Namibia (NAM)	II
NAM/286/98*	AF367127	African buffalo	OVI	Namibia (NAM)	II
BOT/P3/2000 NGO-15*	n/a	African buffalo	WRLFMD	Botswana	II
ZIM01/15b*	n/a	cattle	BVI	Zimbabwe	II
ZIM/5/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/15/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/16/2015	n/a	bovine	WRLFMD	Zimbabwe	II
ZIM/7/83*	AF136607	bovine	OVI	Zimbabwe	II
ZIM/7/83*	DQ009726	bovine	OVI	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/31/89/2*	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/2/88/2*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/7/88/2*	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/16/89/2*	n/a	African buffalo	WRLFMD	Zimbabwe	II
ZIM/2/89/2*	n/a	African buffalo	WRLFMD	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
RHO/1/48	AY593847	n/a	PIADC	Rhodesia	III
KEN/1/84	AY344505	bovine	OVI	Kenya	IV
ETH/1/90	AY343935	bovine	OVI	Ethiopia	IV
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
NIG/2/75	AF367139	bovine	OVI	Nigeria	V
ANG/4/74	AF479417	n/a	OVI	Angola	XI

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