



## FMD Genotyping Report

Lab Reference WRL batch Number: WRLMEG/2022/00004

Sender Details:

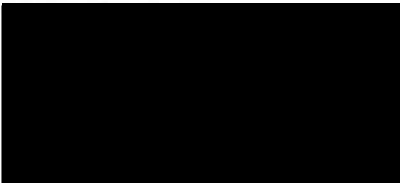
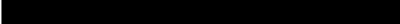


Date Received: 14/01/2022

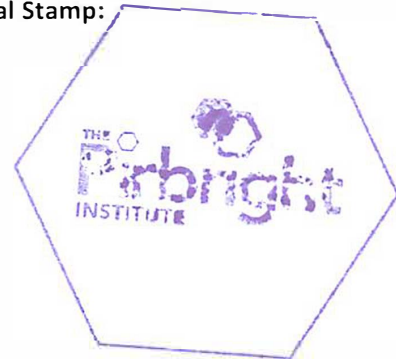
Country of Origin\*: Tunisia

Analytical work has now been completed in respect of the Tunisian VP1 sequences you recently submitted and the details are attached.

Please note that all of our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Res   
Dat   
17/1/22

Official Stamp:



c.c.: L Bakkali-Kassimi, A Bin-tarif, D King, M Henstock, H Hicks, N Knowles, A Ludi, N Mapitse, S Metwally, V Mioulet, J Pinto, K Sumption, J Wadsworth, B Wood, FAO Circulation, OIE Animal Health Information, Regional OIE Delegate.

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: O  
Country: Tunisia  
Year: 2022  
Batch: WRLMEG/2022/00004  
No. of sequences: 2  
Report date: 16th January 2022  
Report generated by: Nick Knowles  
Report checked by: Don King

This report has been prepared on behalf of the Laboratoire de Virologie, Institut de la Recherche Vétérinaire de Tunisie, Tunisia and European Union Reference Laboratory (EURL), FAO Reference Centre & OIE Reference Laboratory for Foot-and-Mouth Disease chez Agence nationale de sécurité sanitaire –ANSES, Maisons-Alfort, Île-de-France, France and covers VP1 sequences submitted to the WRLFMD on 14/01/2022.



Copyright © 2022 The Pirbright Institute, Ash Road, Pirbright, Woking GU24 0NF, United Kingdom.

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

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

The contents of this report should not be reproduced without permission.

Virus sample name:	TUN/V1/22
Sender reference:	O/TUN/V1/22
Location of origin:	Chala, Mornag, Ben Arous Governorate
Country of origin:	Tunisia
Date of collection:	04/01/2022
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	15/01/2022
Last updated:	15/01/2022
VIBASys IDs: sample 49970, genome 49971, sequence viba_49972, sequencing info 49973	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49976	TUN/V6/22	cattle	100.0	0	O	EA-3		
viba_49566	NIG/9/2021	cattle	99.4	0	O	EA-3		
viba_49562	NIG/8/2021	cattle	99.4	0	O	EA-3		
viba_49570	NIG/10/2021	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	0	O	EA-3		
viba_49807	PL/JE/019/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49771	PL/KAN/01/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49803	PL/JE/017/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49787	PL/KAN/05/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49783	PL/KAN/04/NIG/2020	cattle	98.7	0	O	EA-3		

### 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_116	SUD/2/86	bovine	88.3	0	O	EA-3		
viba_50	UGA/17/98		85.6	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.2	0	O	EA-3		
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	84.3	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.2	0	O	WA		
viba_85	UGA/3/2002		83.7	0	O	EA-2		
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	
viba_68	TAI/189/87	bovine	83.5	0	O	SEA		
viba_523	K83/79		83.4	0	O	EA-1		

Virus sample name:	TUN/V6/22
Sender reference:	O/TUN/V6/22
Location of origin:	Chala, Mornag, Ben Arous Governorate
Country of origin:	Tunisia
Date of collection:	04/01/2022
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	15/01/2022
Last updated:	15/01/2022
VIBASys IDs: sample 49974, genome 49975, sequence viba_49976, sequencing info 49977	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49972	TUN/V1/22	cattle	100.0	0	O	EA-3		
viba_49566	NIG/9/2021	cattle	99.4	0	O	EA-3		
viba_49562	NIG/8/2021	cattle	99.4	0	O	EA-3		
viba_49570	NIG/10/2021	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	0	O	EA-3		
viba_49807	PL/JE/019/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49771	PL/KAN/01/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49803	PL/JE/017/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49787	PL/KAN/05/NIG/2020	cattle	98.7	0	O	EA-3		
viba_49783	PL/KAN/04/NIG/2020	cattle	98.7	0	O	EA-3		

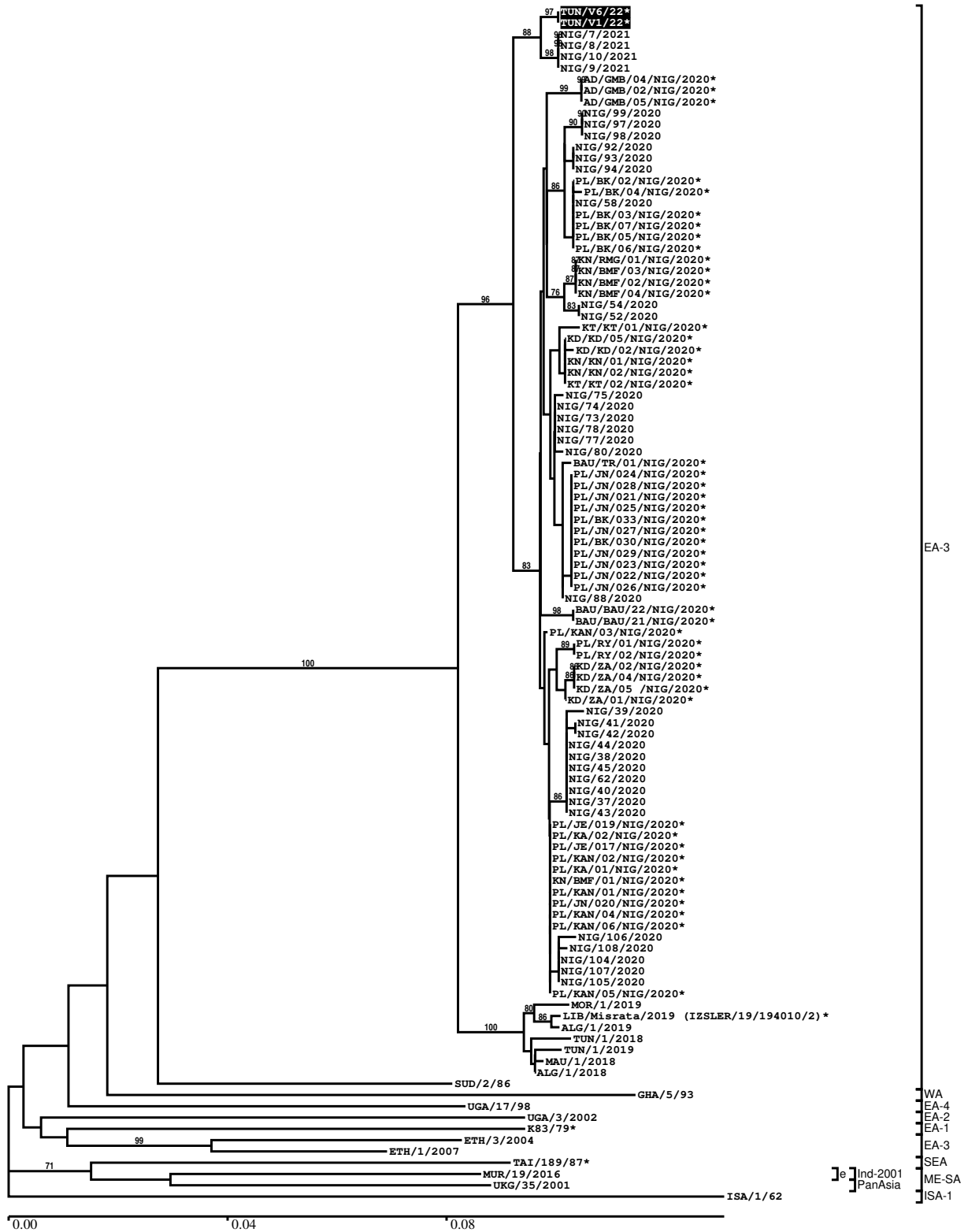
### Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_116	SUD/2/86	bovine	88.3	0	O	EA-3		
viba_50	UGA/17/98		85.6	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.2	0	O	EA-3		
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	84.3	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.2	0	O	WA		
viba_85	UGA/3/2002		83.7	0	O	EA-2		
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	
viba_68	TAI/189/87	bovine	83.5	0	O	SEA		
viba_523	K83/79		83.4	0	O	EA-1		

Report on FMDV O in Tunisia in 2022

Batch: WRLMEG/2022/00004



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2022/00004-Tunisia-O (2 sequences)
Sequence database set:	allseqs_O (5480 sequences)
Prototype sequence set:	!prototypes_O (49 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	636
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/O

label	accession	host(s)	lab	country	taxonomic information
TUN/V6/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/V1/22*	n/a	cattle	ANSES	Tunisia	EA-3
NIG/7/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/8/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/10/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/9/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
AD/GMB/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
AD/GMB/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
AD/GMB/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/99/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/97/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/98/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/92/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/93/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/94/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
PL/BK/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/58/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
PL/BK/03/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/07/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/06/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/RMG/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/BMF/03/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/BMF/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/BMF/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/54/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/52/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
KT/KT/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/KD/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/KD/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/KN/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/KN/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KT/KT/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/75/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/74/2020	n/a	cattle	WRLFMD	Nigeria	EA-3

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
NIG/73/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/78/2020	n/a	sheep	WRLFMD	Nigeria	EA-3
NIG/77/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/80/2020	n/a	sheep	WRLFMD	Nigeria	EA-3
BAU/TR/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/024/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/028/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/021/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/025/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/033/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/027/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/BK/030/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/029/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/023/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/022/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/026/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/88/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
BAU/BAU/22/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
BAU/BAU/21/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/03/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/RV/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/RV/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/ZA/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/ZA/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/ZA/05 /NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/ZA/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/39/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/41/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/42/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/44/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/38/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/45/2020	n/a	sheep	WRLFMD	Nigeria	EA-3
NIG/62/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/40/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/37/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/43/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
PL/JE/019/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KA/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JE/017/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KA/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/BMF/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/020/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/06/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/106/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/108/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/104/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/107/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/105/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
PL/KAN/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
MOR/1/2019	n/a	cattle	WRLFMD	Morocco	EA-3
LIB/Misrata/2019 (IZSLER/19/194010/2)*	n/a	cattle	IZSLER	Libya	EA-3
ALG/1/2019	n/a	cattle	WRLFMD	Algeria	EA-3
TUN/1/2018	n/a	cattle	WRLFMD	Tunisia	EA-3
TUN/1/2019	n/a	cattle	WRLFMD	Tunisia	EA-3
MAU/1/2018	n/a	cattle	WRLFMD	Mauritania	EA-3
ALG/1/2018	n/a	cattle	WRLFMD	Algeria	EA-3
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
GHA/5/93	AJ303488	bovine	WRLFMD	Ghana	WA
UGA/17/98	HM211075	n/a	WRLFMD	Uganda	EA-4
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
K83/79*	AJ303511	n/a	WRLFMD	Kenya	EA-1
ETH/3/2004	FJ798109	cattle	WRLFMD	Ethiopia	EA-3
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA

*continued on next page*

---

label	accession	host(s)	lab	country	taxonomic information
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

\*, not a WRLFMD Reference Number

n/a, not available