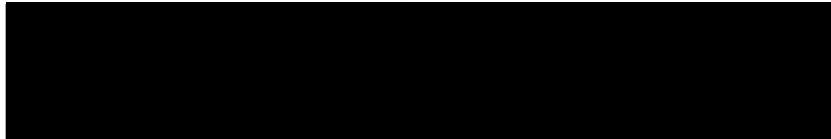




FMD Genotyping Report

Lab Reference WRL batch Number: WRLFMD/2021/00018

Sender Details:



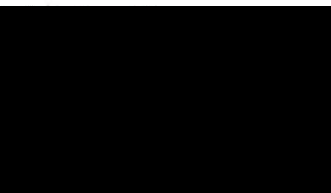
Date Received: 21/12/2021

Country of Origin*: NIGERIA

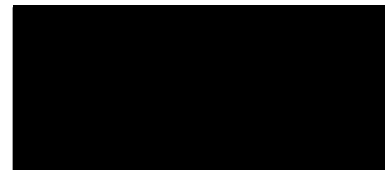
Sequencing work has now been completed in respect of the samples you submitted and the details are as attached. Please note that all of our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

In addition, RNA from the original samples of NIG/12/2021 to NIG/23/2021 were tested by RT-PCR with three different SAT 1 VP1 primer sets and our VP1 universal primer set. No SAT 1 sequences were found. No sequences (not even type O) were found in the FMDV-GD samples (NIG/13/2021 & NIG/14/2021).

Result:

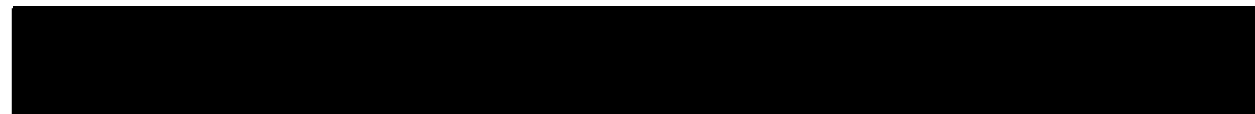


Official Stamp:



Date:

17/12/2022



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).

* Data supplied by the customer

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

Genotyping Report

FMDV serotype: O
Country: Nigeria
Year: 2021
Batch: WRLFMD/2021/00018
No. of sequences: 10
Report date: 17th February 2022
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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

email: reporting@pirbright.ac.uk

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Virus sample name:	NIG/12/2021
Sender reference:	EK/2/21
Location of origin:	Ekiti State
Country of origin:	Nigeria
Date of collection:	08/10/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	26/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50176, genome 50177, sequence viba_50178, sequencing info 50179

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50206	NIG/21/2021	cattle	99.8	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	99.8	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	99.8	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	99.8	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.5	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.5	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.5	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.5	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.5	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	88.6	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_104	GHA/5/93	bovine	84.5	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.1	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	84.0	0	O	EA-3		
viba_68	TAI/189/87	bovine	83.8	0	O	SEA		
viba_199	MYA/7/98	bovine	83.6	0	O	SEA	Mya-98	
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	
viba_85	UGA/3/2002		83.4	0	O	EA-2		

Virus sample name:	NIG/15/2021
Sender reference:	PL/KK/2/21
Location of origin:	Kanke, Plateau State
Country of origin:	Nigeria
Date of collection:	12/09/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	26/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50180, genome 50181, sequence viba_50182, sequencing info 50183

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50190	NIG/17/2021	cattle	100.0	0	O	EA-3		
viba_50186	NIG/16/2021	cattle	99.7	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.2	0	O	EA-3		
viba_50206	NIG/21/2021	cattle	99.1	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	99.1	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	99.1	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	99.1	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	99.1	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	98.7	0	O	EA-3		
viba_50098	TUN/22Z751/22	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	87.9	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_854	ETH/1/2007	cattle	84.7	0	O	EA-3		
viba_104	GHA/5/93	bovine	83.8	0	O	WA		
viba_30238	MUR/19/2016	cattle	83.4	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	83.4	0	O	EA-3		
viba_199	MYA/7/98	bovine	83.0	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	83.0	0	O	SEA		
viba_621	ETH/58/2005	bovine	83.0	0	O	EA-4		
viba_285	UKG/35/2001	porcine	82.8	0	O	ME-SA	PanAsia	

Virus sample name:	NIG/16/2021
Sender reference:	PL/KK/3/21
Location of origin:	Kanke, Plateau State
Country of origin:	Nigeria
Date of collection:	12/09/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	26/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50184, genome 50185, sequence viba_50186, sequencing info 50187

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50182	NIG/15/2021	cattle	99.7	0	O	EA-3		
viba_50190	NIG/17/2021	cattle	99.7	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	98.9	0	O	EA-3		
viba_50206	NIG/21/2021	cattle	98.7	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	98.7	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	98.7	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	98.7	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	98.7	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	98.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	98.4	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	87.9	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_854	ETH/1/2007	cattle	84.7	0	O	EA-3		
viba_104	GHA/5/93	bovine	83.8	0	O	WA		
viba_30238	MUR/19/2016	cattle	83.4	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	83.4	0	O	EA-3		
viba_199	MYA/7/98	bovine	83.0	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	83.0	0	O	SEA		
viba_621	ETH/58/2005	bovine	83.0	0	O	EA-4		
viba_62	ETH/2/2006	bovine	82.9	0	O	EA-3		

Virus sample name:	NIG/17/2021
Sender reference:	PL/KK/4/21
Location of origin:	Kanke, Plateau State
Country of origin:	Nigeria
Date of collection:	12/09/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50188, genome 50189, sequence viba_50190, sequencing info 50191

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50182	NIG/15/2021	cattle	100.0	0	O	EA-3		
viba_50186	NIG/16/2021	cattle	99.7	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.2	0	O	EA-3		
viba_50206	NIG/21/2021	cattle	99.1	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	99.1	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	99.1	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	99.1	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	99.1	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	98.7	0	O	EA-3		
viba_50098	TUN/22Z751/22	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	87.9	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_854	ETH/1/2007	cattle	84.7	0	O	EA-3		
viba_104	GHA/5/93	bovine	83.8	0	O	WA		
viba_30238	MUR/19/2016	cattle	83.4	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	83.4	0	O	EA-3		
viba_199	MYA/7/98	bovine	83.0	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	83.0	0	O	SEA		
viba_621	ETH/58/2005	bovine	83.0	0	O	EA-4		
viba_285	UKG/35/2001	porcine	82.8	0	O	ME-SA	PanAsia	

Virus sample name:	NIG/18/2021
Sender reference:	PJ/JS/5/21
Location of origin:	Jos South, Plateau State
Country of origin:	Nigeria
Date of collection:	21/10/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50192, genome 50193, sequence viba_50194, sequencing info 50195

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49558	NIG/7/2021	cattle	100.0	0	O	EA-3		
viba_49570	NIG/10/2021	cattle	100.0	0	O	EA-3		
viba_49562	NIG/8/2021	cattle	100.0	0	O	EA-3		
viba_49566	NIG/9/2021	cattle	100.0	0	O	EA-3		
viba_50090	TUN/22Z749/22	cattle	99.5	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.5	0	O	EA-3		
viba_50106	TUN/22Z753/22	cattle	99.5	0	O	EA-3		
viba_50110	TUN/22Z754/22	cattle	99.5	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	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	89.0	0	O	EA-3		
viba_50	UGA/17/98		85.6	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.5	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.9	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_408	ETH/3/2004	cattle	84.0	0	O	EA-3		
viba_68	TAI/189/87	bovine	83.8	0	O	SEA		
viba_199	MYA/7/98	bovine	83.6	0	O	SEA	Mya-98	
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.5	0	O	ME-SA	Ind-2001	d

Virus sample name:	NIG/19/2021
Sender reference:	PL/PKN/1/21
Location of origin:	Pankshin, Plateau State
Country of origin:	Nigeria
Date of collection:	12/11/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50196, genome 50197, sequence viba_50198, sequencing info 50199

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50206	NIG/21/2021	cattle	100.0	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	100.0	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	100.0	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	100.0	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.4	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	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	88.5	0	O	EA-3		
viba_50	UGA/17/98		85.5	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.0	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.7	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.3	0	O	ME-SA	Ind-2001	e
viba_68	TAI/189/87	bovine	83.9	0	O	SEA		
viba_199	MYA/7/98	bovine	83.8	0	O	SEA	Mya-98	
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.3	0	O	ME-SA	Ind-2001	d

Virus sample name:	NIG/20/2021
Sender reference:	PL/PKN/2/21
Location of origin:	Pankshin, Plateau State
Country of origin:	Nigeria
Date of collection:	12/11/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50200, genome 50201, sequence viba_50202, sequencing info 50203

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50206	NIG/21/2021	cattle	100.0	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	100.0	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	100.0	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	100.0	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.4	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	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	88.5	0	O	EA-3		
viba_50	UGA/17/98		85.5	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.0	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.7	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.3	0	O	ME-SA	Ind-2001	e
viba_68	TAI/189/87	bovine	83.9	0	O	SEA		
viba_199	MYA/7/98	bovine	83.8	0	O	SEA	Mya-98	
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.3	0	O	ME-SA	Ind-2001	d

Virus sample name:	NIG/21/2021
Sender reference:	PL/PKN/3/21
Location of origin:	Pankshin, Plateau State
Country of origin:	Nigeria
Date of collection:	12/11/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50204, genome 50205, sequence viba_50206, sequencing info 50207

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50198	NIG/19/2021	cattle	100.0	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	100.0	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	100.0	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	100.0	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.4	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	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	88.5	0	O	EA-3		
viba_50	UGA/17/98		85.5	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.0	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.7	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.3	0	O	ME-SA	Ind-2001	e
viba_68	TAI/189/87	bovine	83.9	0	O	SEA		
viba_199	MYA/7/98	bovine	83.8	0	O	SEA	Mya-98	
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.3	0	O	ME-SA	Ind-2001	d

Virus sample name:	NIG/22/2021
Sender reference:	PL/PKN/4/21
Location of origin:	Pankshin, Plateau State
Country of origin:	Nigeria
Date of collection:	12/11/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50208, genome 50209, sequence viba_50210, sequencing info 50211

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50206	NIG/21/2021	cattle	100.0	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	100.0	0	O	EA-3		
viba_50214	NIG/23/2021	cattle	100.0	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	100.0	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.4	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	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	88.5	0	O	EA-3		
viba_50	UGA/17/98		85.5	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.0	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.7	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.3	0	O	ME-SA	Ind-2001	e
viba_68	TAI/189/87	bovine	83.9	0	O	SEA		
viba_199	MYA/7/98	bovine	83.8	0	O	SEA	Mya-98	
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.3	0	O	ME-SA	Ind-2001	d

Virus sample name:	NIG/23/2021
Sender reference:	PL/PKN/5/21
Location of origin:	Pankshin, Plateau State
Country of origin:	Nigeria
Date of collection:	12/11/2021
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	WRL-LFBK1
Harvest date of material:	28/01/2022
Primers:	O-1C244F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	08/02/2022
Created:	11/02/2022
Last updated:	11/02/2022

VIBASys IDs: sample 50212, genome 50213, sequence viba_50214, sequencing info 50215

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_50206	NIG/21/2021	cattle	100.0	0	O	EA-3		
viba_50198	NIG/19/2021	cattle	100.0	0	O	EA-3		
viba_50210	NIG/22/2021	cattle	100.0	0	O	EA-3		
viba_50202	NIG/20/2021	cattle	100.0	0	O	EA-3		
viba_50178	NIG/12/2021	cattle	99.8	0	O	EA-3		
viba_50078	TUN/22Z745/22	cattle	99.4	0	O	EA-3		
viba_50098	TUN/22Z751/22	cattle	99.4	0	O	EA-3		
viba_50118	TUN/22Z994/22	cattle	99.4	0	O	EA-3		
viba_50114	TUN/22Z756/22	cattle	99.4	0	O	EA-3		
viba_49558	NIG/7/2021	cattle	99.4	0	O	EA-3		

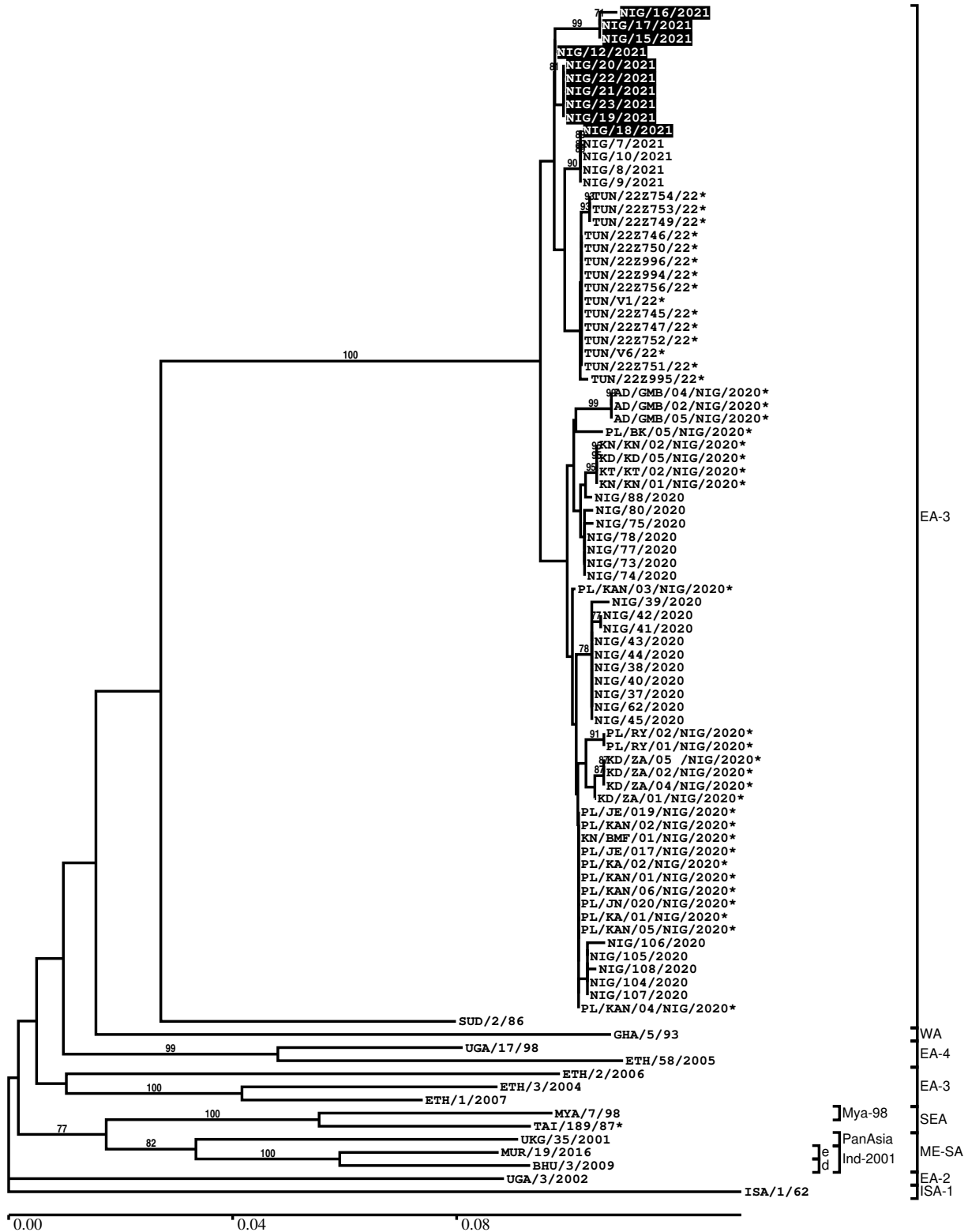
Most Closely Related Prototype Sequences

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	88.5	0	O	EA-3		
viba_50	UGA/17/98		85.5	0	O	EA-4		
viba_854	ETH/1/2007	cattle	85.0	0	O	EA-3		
viba_104	GHA/5/93	bovine	84.7	0	O	WA		
viba_30238	MUR/19/2016	cattle	84.3	0	O	ME-SA	Ind-2001	e
viba_68	TAI/189/87	bovine	83.9	0	O	SEA		
viba_199	MYA/7/98	bovine	83.8	0	O	SEA	Mya-98	
viba_408	ETH/3/2004	cattle	83.8	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.7	0	O	ME-SA	PanAsia	
viba_293	BHU/3/2009	cattle	83.3	0	O	ME-SA	Ind-2001	d

Report on FMDV O in Nigeria in 2021

Batch: WRLFMD/2021/00018



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2021/00018-Nigeria-O (10 sequences)
Sequence database set:	allseqs_O (5533 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:	13
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
NIG/16/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/17/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/15/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/12/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/20/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/22/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/21/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/23/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/19/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/18/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/7/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/10/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/8/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/9/2021	n/a	cattle	WRLFMD	Nigeria	EA-3
TUN/22Z754/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z753/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z749/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z746/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z750/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z996/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z994/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z756/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/V1/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z745/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z747/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z752/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/V6/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z751/22*	n/a	cattle	ANSES	Tunisia	EA-3
TUN/22Z995/22*	n/a	cattle	ANSES	Tunisia	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
PL/BK/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/KN/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KD/KD/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KT/KT/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3

continued on next page

label	accession	host(s)	lab	country	taxonomic information
KN/KN/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/88/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/80/2020	n/a	sheep	WRLFMD	Nigeria	EA-3
NIG/75/2020	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/73/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/74/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
PL/KAN/03/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/39/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/42/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/41/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/43/2020	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/40/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/37/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/62/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/45/2020	n/a	sheep	WRLFMD	Nigeria	EA-3
PL/RV/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/RV/01/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/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/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JE/019/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
KN/BMF/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JE/017/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KA/02/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/06/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/JN/020/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KA/01/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
PL/KAN/05/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	EA-3
NIG/106/2020	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/105/2020	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
PL/KAN/04/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	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
ETH/58/2005	FJ798141	bovine	WRLFMD	Ethiopia	EA-4
ETH/2/2006	FJ798127	bovine	WRLFMD	Ethiopia	EA-3
ETH/3/2004	FJ798109	cattle	WRLFMD	Ethiopia	EA-3
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
MYA/7/98	DQ164925	bovine	WRLFMD	Myanmar	SEA/Mya-98
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available