

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

Genotyping Report

FMDV serotype: SAT2
Country: Nigeria
Year: 2020
Batch: WRLMEG/2021/00019
No. of sequences: 12
Report date: 22nd December 2021
Report generated by: Nick Knowles
Report checked by: Don King

This report has been prepared on behalf of the National Centre for Foreign Animal Disease (NCFAD), Canadian Food Inspection Agency (CFIA), Winnipeg, Manitoba, Canada and the National Veterinary Research Institute (NVRI), Vom, Nigeria and covers VP1 sequences (extracted from whole genome sequences) submitted to the WRLFMD on 11/12/2021. This report supersedes that of a previous batch (WRLMEG/2021/00017) which included some of the same sequences.



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email: reporting@pirbright.ac.uk

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Virus sample name:	PL/JS/02b/NIG/2020
Sender reference:	PL/JS/02
Location of origin:	Jos South, Plateau state
Country of origin:	Nigeria
Date of collection:	14/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49667, genome 49668, sequence viba_49669, sequencing info 49670	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.7	0	SAT2	VII		

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_742	CAR/8/2005	cattle	89.9	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.8	1	SAT2	VII		
viba_456	ZAI/1/82	bovine	75.0	1	SAT2	X		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_470	KEN/2/84	bovine	74.5	0	SAT2	IX		
viba_756	UGA/19/98		74.1	0	SAT2	X		
viba_752	SA/106/59		74.0	0	SAT2	I		
viba_189	RWA/1/2000		73.5	0	SAT2	VIII		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_374	ZAI/1/74		73.3	0	SAT2	VIII		

Virus sample name:	PL/BL/001/NIG/2020
Sender reference:	PL/BL/001
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49671, genome 49672, sequence viba_49673, sequencing info 49674	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49705	PL/BL/010/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	100.0	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	100.0	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	100.0	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	100.0	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.0	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.9	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Virus sample name:	PL/BL/002/NIG/2020
Sender reference:	PL/BL/002
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49675, genome 49676, sequence viba_49677, sequencing info 49678	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	100.0	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	100.0	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	100.0	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	100.0	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.0	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.9	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Virus sample name:	PL/BL/003/NIG/2020
Sender reference:	PL/BL/003
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49679, genome 49680, sequence viba_49681, sequencing info 49682	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49709	PL/BL/011/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49701	PL/BL/009/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.2	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	89.1	1	SAT2	VII		
viba_380	RHO/1/48		74.8	0	SAT2	III		
viba_456	ZAI/1/82	bovine	74.4	1	SAT2	X		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_470	KEN/2/84	bovine	74.0	0	SAT2	IX		
viba_752	SA/106/59		74.0	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.3	0	SAT2	I		

Virus sample name:	PL/BL/004/NIG/2020
Sender reference:	PL/BL/004
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49683, genome 49684, sequence viba_49685, sequencing info 49686	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	100.0	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	100.0	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	100.0	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	100.0	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.0	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.9	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Virus sample name:	PL/BL/006/NIG/2020
Sender reference:	PL/BL/006
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49687, genome 49688, sequence viba_49689, sequencing info 49690	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49359	NIG/57/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49355	NIG/56/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	89.9	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.8	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.1	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.0	1	SAT2	X		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_470	KEN/2/84	bovine	73.7	0	SAT2	IX		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.2	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Virus sample name:	PL/BL/007/NIG/2020
Sender reference:	PL/BL/007
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49691, genome 49692, sequence viba_49693, sequencing info 49694	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	99.8	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.7	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.2	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.8	1	SAT2	VII		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.8	0	SAT2	IX		
viba_380	RHO/1/48		73.8	0	SAT2	III		
viba_752	SA/106/59		73.5	0	SAT2	I		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_183	ZIM/14/2002	bovine	73.3	0	SAT2	I		
viba_273	ETH/1/90	bovine	73.2	0	SAT2	IV		

Virus sample name:	PL/BL/008/NIG/2020
Sender reference:	PL/BL/008
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49695, genome 49696, sequence viba_49697, sequencing info 49698	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	99.8	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.7	0	SAT2	VII		

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_742	CAR/8/2005	cattle	89.9	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.8	1	SAT2	VII		
viba_380	RHO/1/48		74.5	0	SAT2	III		
viba_756	UGA/19/98		74.1	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.0	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.7	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.2	0	SAT2	IV		
viba_189	RWA/1/2000		73.2	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.0	0	SAT2	I		

Virus sample name:	PL/BL/009/NIG/2020
Sender reference:	PL/BL/009
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49699, genome 49700, sequence viba_49701, sequencing info 49702	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49681	PL/BL/003/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49709	PL/BL/011/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.2	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	89.1	1	SAT2	VII		
viba_380	RHO/1/48		74.8	0	SAT2	III		
viba_456	ZAI/1/82	bovine	74.4	1	SAT2	X		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_470	KEN/2/84	bovine	74.0	0	SAT2	IX		
viba_752	SA/106/59		74.0	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.3	0	SAT2	I		

Virus sample name:	PL/BL/010/NIG/2020
Sender reference:	PL/BL/010
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49703, genome 49704, sequence viba_49705, sequencing info 49706	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	100.0	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	100.0	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	100.0	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	100.0	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.0	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.9	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Virus sample name:	PL/BL/011/NIG/2020
Sender reference:	PL/BL/011
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49707, genome 49708, sequence viba_49709, sequencing info 49710	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49681	PL/BL/003/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49701	PL/BL/009/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49673	PL/BL/001/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	99.8	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	99.8	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49713	PL/BL/012/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	99.8	0	SAT2	VII		

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_742	CAR/8/2005	cattle	90.2	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	89.1	1	SAT2	VII		
viba_380	RHO/1/48		74.8	0	SAT2	III		
viba_456	ZAI/1/82	bovine	74.4	1	SAT2	X		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_470	KEN/2/84	bovine	74.0	0	SAT2	IX		
viba_752	SA/106/59		74.0	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.3	0	SAT2	I		

Virus sample name:	PL/BL/012/NIG/2020
Sender reference:	PL/BL/012
Location of origin:	Barkin Ladi, Plateau State
Country of origin:	Nigeria
Date of collection:	23/09/2020
Host species:	cattle
Serotype:	SAT2
Topotype:	VII
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	22/12/2021
Last updated:	22/12/2021
VIBASys IDs: sample 49711, genome 49712, sequence viba_49713, sequencing info 49714	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_49673	PL/BL/001/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49705	PL/BL/010/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49371	NIG/91/2020	cattle	100.0	0	SAT2	VII		
viba_49677	PL/BL/002/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49375	NIG/92/2020	cattle	100.0	0	SAT2	VII		
viba_49685	PL/BL/004/NIG/2020	cattle	100.0	0	SAT2	VII		
viba_49351	NIG/51/2020	cattle	100.0	0	SAT2	VII		
viba_49367	NIG/60/2020	cattle	100.0	0	SAT2	VII		
viba_49669	PL/JS/02b/NIG/2020	cattle	99.8	0	SAT2	VII		
viba_49681	PL/BL/003/NIG/2020	cattle	99.8	0	SAT2	VII		

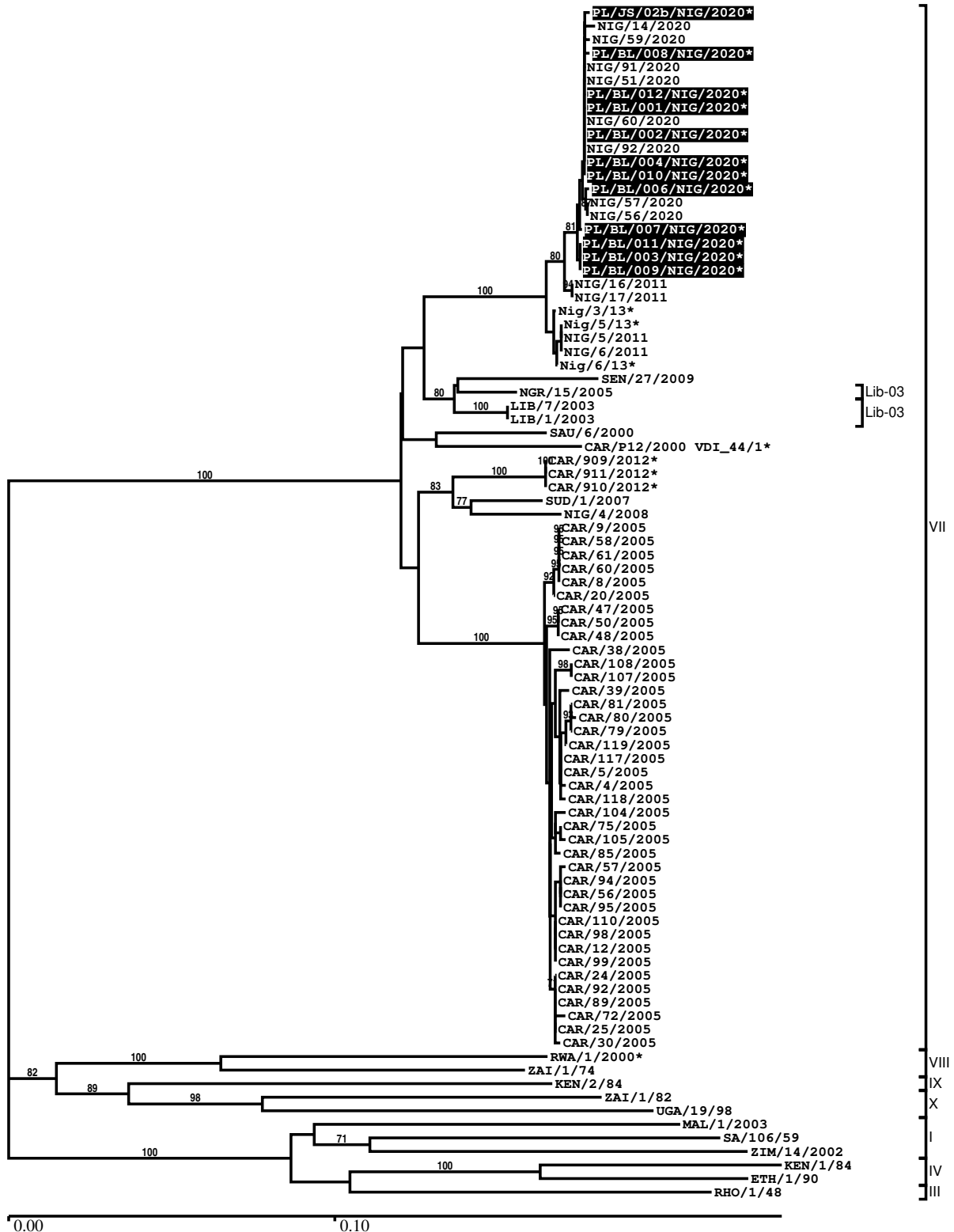
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_742	CAR/8/2005	cattle	90.0	0	SAT2	VII		
viba_424	SAU/6/2000	bovine	88.9	1	SAT2	VII		
viba_380	RHO/1/48		74.6	0	SAT2	III		
viba_756	UGA/19/98		74.2	0	SAT2	X		
viba_456	ZAI/1/82	bovine	74.1	1	SAT2	X		
viba_470	KEN/2/84	bovine	73.9	0	SAT2	IX		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_248	KEN/1/84	bovine	73.4	0	SAT2	IV		
viba_189	RWA/1/2000		73.4	0	SAT2	VIII		
viba_111	MAL/1/2003	bovine	73.2	0	SAT2	I		

Report on FMDV SAT2 in Nigeria in 2020

Batch: WRLMEG/2021/00019



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_SAT2
Query sequence set:	WRLMEG/2021/00019-Nigeria-SAT2 (12 sequences)
Sequence database set:	allseqs_SAT2 (1095 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:	13
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
PL/JS/02b/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/14/2020	n/a	cattle	WRLFMD	Nigeria	VII
NIG/59/2020	n/a	cattle	WRLFMD	Nigeria	VII
PL/BL/008/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/91/2020	n/a	cattle	WRLFMD	Nigeria	VII
NIG/51/2020	n/a	cattle	WRLFMD	Nigeria	VII
PL/BL/012/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/001/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/60/2020	n/a	cattle	WRLFMD	Nigeria	VII
PL/BL/002/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/92/2020	n/a	cattle	WRLFMD	Nigeria	VII
PL/BL/004/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/010/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/006/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/57/2020	n/a	cattle	WRLFMD	Nigeria	VII
NIG/56/2020	n/a	cattle	WRLFMD	Nigeria	VII
PL/BL/007/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/011/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/003/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
PL/BL/009/NIG/2020*	n/a	cattle	NCFAD/NVRI	Nigeria	VII
NIG/16/2011	KX258092	bovine	WRLFMD	Nigeria	VII
NIG/17/2011	KX258093	bovine	WRLFMD	Nigeria	VII
Nig/3/13*	MF624358	bovine	CODA-CERVA	Nigeria	VII
Nig/5/13*	MF624360	bovine	CODA-CERVA	Nigeria	VII
NIG/5/2011	KX258084	bovine	WRLFMD	Nigeria	VII
NIG/6/2011	KX258085	bovine	WRLFMD	Nigeria	VII
Nig/6/13*	MF683468	bovine	CODA-CERVA	Nigeria	VII
SEN/27/2009	KF112967	cattle	WRLFMD	Senegal	VII
NGR/15/2005	KF112960	cattle	WRLFMD	Niger	VII/Lib-03
LIB/7/2003	JX570632	n/a	WRLFMD	Libya	VII/Lib-03
LIB/1/2003	JX570631	n/a	WRLFMD	Libya	VII/Lib-03
SAU/6/2000	AF367135	bovine	OVI	Saudi Arabia	VII
CAR/P12/2000 VDI_44/1*	HM211082	n/a	WRLFMD	Cameroon	VII
CAR/909/2012*	KU720582	cattle	PIADC	Cameroon	VII
CAR/911/2012*	KU720584	cattle	PIADC	Cameroon	VII
CAR/910/2012*	KU720583	cattle	PIADC	Cameroon	VII

continued on next page

label	accession	host(s)	lab	country	taxonomic information
SUD/1/2007	GU566071	cattle	WRLFMD	Sudan	VII
NIG/4/2008	KX258079	cattle	WRLFMD	Nigeria	VII
CAR/9/2005	KX258139	cattle	WRLFMD	Cameroon	VII
CAR/58/2005	KX258157	cattle	WRLFMD	Cameroon	VII
CAR/61/2005	KX258159	cattle	WRLFMD	Cameroon	VII
CAR/60/2005	KX258158	cattle	WRLFMD	Cameroon	VII
CAR/8/2005	JX570616	cattle	WRLFMD	Cameroon	VII
CAR/20/2005	KX258141	cattle	WRLFMD	Cameroon	VII
CAR/47/2005	KX258151	cattle	WRLFMD	Cameroon	VII
CAR/50/2005	KX258153	cattle	WRLFMD	Cameroon	VII
CAR/48/2005	KX258152	cattle	WRLFMD	Cameroon	VII
CAR/38/2005	KX258147	cattle	WRLFMD	Cameroon	VII
CAR/108/2005	KX258179	cattle	WRLFMD	Cameroon	VII
CAR/107/2005	KX258178	cattle	WRLFMD	Cameroon	VII
CAR/39/2005	KX258148	cattle	WRLFMD	Cameroon	VII
CAR/81/2005	KX258168	cattle	WRLFMD	Cameroon	VII
CAR/80/2005	KX258167	cattle	WRLFMD	Cameroon	VII
CAR/79/2005	KX258166	cattle	WRLFMD	Cameroon	VII
CAR/119/2005	KX258184	cattle	WRLFMD	Cameroon	VII
CAR/117/2005	KX258182	cattle	WRLFMD	Cameroon	VII
CAR/5/2005	KX258137	cattle	WRLFMD	Cameroon	VII
CAR/4/2005	KX258136	cattle	WRLFMD	Cameroon	VII
CAR/118/2005	KX258183	cattle	WRLFMD	Cameroon	VII
CAR/104/2005	KX258176	cattle	WRLFMD	Cameroon	VII
CAR/75/2005	KX258165	cattle	WRLFMD	Cameroon	VII
CAR/105/2005	KX258177	cattle	WRLFMD	Cameroon	VII
CAR/85/2005	KX258169	cattle	WRLFMD	Cameroon	VII
CAR/57/2005	KX258156	cattle	WRLFMD	Cameroon	VII
CAR/94/2005	KX258172	cattle	WRLFMD	Cameroon	VII
CAR/56/2005	KX258155	cattle	WRLFMD	Cameroon	VII
CAR/95/2005	KX258173	cattle	WRLFMD	Cameroon	VII
CAR/110/2005	KX258181	cattle	WRLFMD	Cameroon	VII
CAR/98/2005	KX258174	cattle	WRLFMD	Cameroon	VII
CAR/12/2005	KX258140	cattle	WRLFMD	Cameroon	VII
CAR/99/2005	KX258175	cattle	WRLFMD	Cameroon	VII
CAR/24/2005	KX258142	cattle	WRLFMD	Cameroon	VII
CAR/92/2005	KX258171	cattle	WRLFMD	Cameroon	VII
CAR/89/2005	KX258170	cattle	WRLFMD	Cameroon	VII
CAR/72/2005	KX258164	cattle	WRLFMD	Cameroon	VII
CAR/25/2005	KX258143	cattle	WRLFMD	Cameroon	VII
CAR/30/2005	KX258144	cattle	WRLFMD	Cameroon	VII
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
ZAI/1/82	AF367100	bovine	OVI	Zaire	X
UGA/19/98	AY343969	n/a	OVI	Uganda	X
MAL/1/2003	n/a	bovine	WRLFMD	Malawi	I
SA/106/59	AY593848	n/a	PIADC	South Africa (SA)	I
ZIM/14/2002	KF219689	bovine	WRLFMD	Zimbabwe	I
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

*, not a WRLFMD Reference Number

n/a, not available