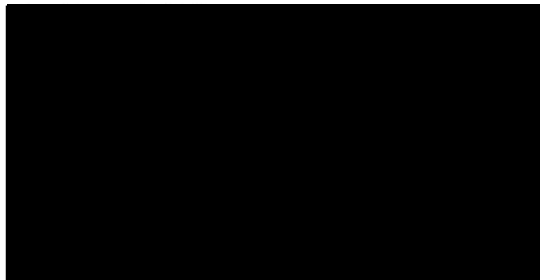




FMD Genotyping Report

Lab Reference WRL batch Number: WRLFMD/2025/000013

Sender Details:



Date Received: 02/06/2025

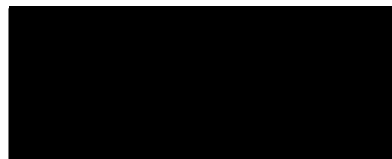
Country of Origin*: Nigeria

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:



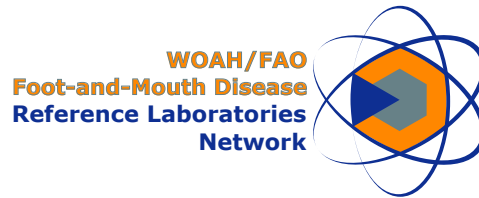
Official Stamp:



Date: 27/8/25

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)

FMDV Genotyping Report

Generated from: FMDtype | FMDV Genotyping Tool

Downloaded on: 20 June 2025

Citation: WRLFMD. 2025. FMDV Genotyping Report [WRLFMD/2025/000013]. (Accessed 20/06/25)

FMDV serotype: SAT2

Country: Nigeria

Year: 2023-2024

Batch: WRLFMD/2025/000013

No. of sequences: 2

Reported date: 20 June 2025

WRLFMD Website: <https://www.wrlfmd.org/>

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: NIG/14/2023

Sample details

Reception Date:	2025-06-02
Sender reference:	FMD/23/43(757 29-01-2025
Location of origin:	NA
Country of origin:	Nigeria
Date of collection:	2023-12-01
Host species:	cattle

Genotyping details

Serotype:	SAT2
Topotype:	VII
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-04
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
11779	NIG/16/2011	Bovine	97.35	0	SAT2	VII	None	None
11783	NIG/17/2011	Bovine	97.35	0	SAT2	VII	None	None
11951	Nig-sample-5		97.35	0	SAT2	VII	None	None
296390	NIG/51/2020	Cattle	97.35	0	SAT2	VII	None	None
296394	NIG/60/2020	Cattle	97.35	0	SAT2	VII	None	None
296395	NIG/91/2020	Cattle	97.35	0	SAT2	VII	None	None
296396	NIG/92/2020	Cattle	97.35	0	SAT2	VII	None	None
296398	PL/BL/001/NIG/2020	Cattle	97.35	0	SAT2	VII	None	None
296399	PL/BL/002/NIG/2020	Cattle	97.35	0	SAT2	VII	None	None
296401	PL/BL/004/NIG/2020	Cattle	97.35	0	SAT2	VII	None	None
FMDV VP1 Prototype Sequences*								
10670	LIB/7/2003	Cattle	92.68	0	SAT2	VII	Lib-03	None
4252	CAR/8/2005	Cattle	89.72	0	SAT2	VII	None	None
13689	SAU/6/2000		88.78	1	SAT2	VII	None	None
5058	EGY/3/2012	Cattle	87.85	0	SAT2	VII	Ghb-12	None
10642	LIB/39/2012	Cattle	87.69	0	SAT2	VII	Lib-12	None
4995	EGY/2/2012	Cattle	87.25	0	SAT2	VII	Alx-12	None
10058	KEN/3/57	Bovine	75.27	0	SAT2	IX	None	None

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

Virus sample: NIG/20/2024

Sample details

Reception Date:	2025-06-02
Sender reference:	FMD/23/45(779 29-01-2025)
Location of origin:	NA
Country of origin:	Nigeria
Date of collection:	2024-12-01
Host species:	sheep

Genotyping details

Serotype:	SAT2
Topotype:	VII
Lineage:	None
Sublineage:	None

Sequencing details

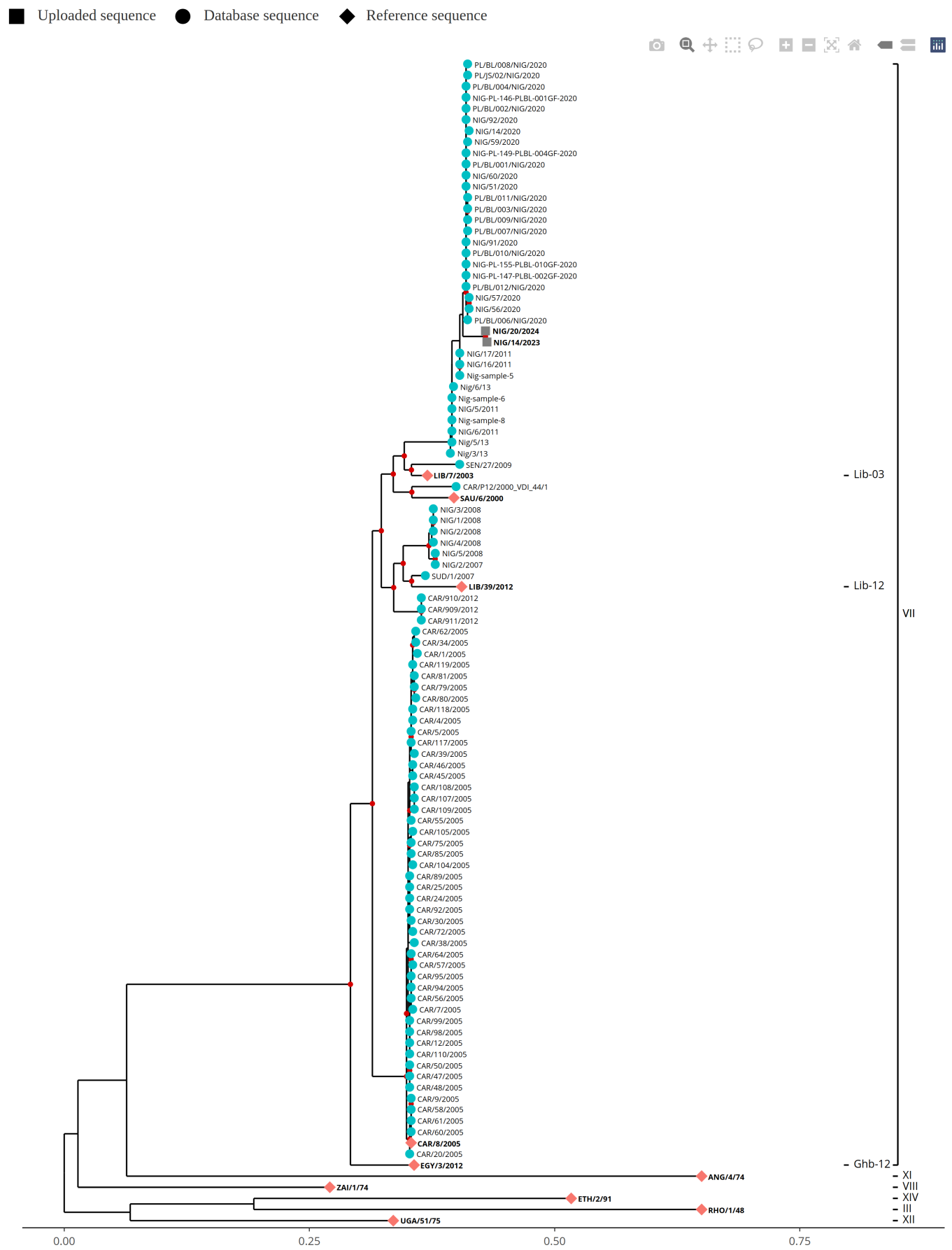
Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	2025-06-06
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
11779	NIG/16/2011	Bovine	97.51	0	SAT2	VII	None	None
11783	NIG/17/2011	Bovine	97.51	0	SAT2	VII	None	None
11951	Nig-sample-5		97.51	0	SAT2	VII	None	None
296390	NIG/51/2020	Cattle	97.51	0	SAT2	VII	None	None
296394	NIG/60/2020	Cattle	97.51	0	SAT2	VII	None	None
296395	NIG/91/2020	Cattle	97.51	0	SAT2	VII	None	None
296396	NIG/92/2020	Cattle	97.51	0	SAT2	VII	None	None
296398	PL/BL/001/NIG/2020	Cattle	97.51	0	SAT2	VII	None	None
296399	PL/BL/002/NIG/2020	Cattle	97.51	0	SAT2	VII	None	None
296401	PL/BL/004/NIG/2020	Cattle	97.51	0	SAT2	VII	None	None
FMDV VP1 Prototype Sequences*								
10670	LIB/7/2003	Cattle	92.83	0	SAT2	VII	Lib-03	None
4252	CAR/8/2005	Cattle	89.88	0	SAT2	VII	None	None
13689	SAU/6/2000		88.94	1	SAT2	VII	None	None
5058	EGY/3/2012	Cattle	88.01	0	SAT2	VII	Ghb-12	None
10642	LIB/39/2012	Cattle	87.85	0	SAT2	VII	Lib-12	None
4995	EGY/2/2012	Cattle	87.40	0	SAT2	VII	Alx-12	None
10058	KEN/3/57	Bovine	75.42	0	SAT2	IX	None	None

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

Tree



Analysis Parameters

Query sequence set: WRLFMD/2025/000013
Number of related sequences reported: 93
Number of prototype sequences in tree: 10
Minimal VP1 subsequence match length: 610
Sequence alignment length: 643

Number of sequences in tree capped at: 100
Sequence alignment method: MAFFT 7.522
Phylogeny reconstruction method: IQ-TREE 2.26
Number of bootstrap samples: 1000
Displaying bootstrap values above: 75

FMDV VP1 Sequences included in the Phylogenetic Tree

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
NIG/1/2008	KX258076	Cattle	WRLFMD	Nigeria	SAT2/VII	27718336
NIG/16/2011	KX258092	Bovine	WRLFMD	Nigeria	SAT2/VII	27718336
NIG/17/2011	KX258093	Bovine	WRLFMD	Nigeria	SAT2/VII	27718336
NIG/2/2007	JX570636	Cattle	WRLFMD	Nigeria	SAT2/VII	23025522
NIG/2/2008	KX258077	Cattle	WRLFMD	Nigeria	SAT2/VII	27718336
Nig/3/13 *	MF624358	Bovine	CODA-CERVA	Nigeria	SAT2/VII	28097814
NIG/3/2008	KX258078	Cattle	WRLFMD	Nigeria	SAT2/VII	27718336
NIG/4/2008	KX258079	Cattle	WRLFMD	Nigeria	SAT2/VII	27718336
Nig/5/13 *	MF624360	Bovine	CODA-CERVA	Nigeria	SAT2/VII	28097814
NIG/5/2008	KX258080	Cattle	WRLFMD	Nigeria	SAT2/VII	27718336
NIG/5/2011	KX258084	Bovine	WRLFMD	Nigeria	SAT2/VII	27718336
Nig/6/13 *	MF683468	Bovine	CODA-CERVA	Nigeria	SAT2/VII	28097814
NIG/6/2011	KX258085	Bovine	WRLFMD	Nigeria	SAT2/VII	27718336
Nig-sample-5 *	None		ANSES	Nigeria	SAT2/VII	None
Nig-sample-6 *	None		ANSES	Nigeria	SAT2/VII	None
Nig-sample-8 *	None		ANSES	Nigeria	SAT2/VII	None
SEN/27/2009	KF112967	Cattle	WRLFMD	Senegal	SAT2/VII	24149511
SUD/1/2007	GU566071	Cattle	WRLFMD	Sudan	SAT2/VII	20626708
NIG/14/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/51/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/56/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/57/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/59/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/60/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/91/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
NIG/92/2020	None	Cattle	WRLFMD	Nigeria	SAT2/VII	None
PL/JS/02/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/001/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/002/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/003/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/004/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/006/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/007/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/008/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/009/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/010/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/011/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
PL/BL/012/NIG/2020 *	None	Cattle	NCFAD	Nigeria	SAT2/VII	None
CAR/1/2005	JX570615	Cattle	WRLFMD	Cameroon	SAT2/VII	23025522
CAR/104/2005	KX258176	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/105/2005	KX258177	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/107/2005	KX258178	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/108/2005	KX258179	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/109/2005	KX258180	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/110/2005	KX258181	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/117/2005	KX258182	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/118/2005	KX258183	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/119/2005	KX258184	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/12/2005	KX258140	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/20/2005	KX258141	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/24/2005	KX258142	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/25/2005	KX258143	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/30/2005	KX258144	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/34/2005	KX258146	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/38/2005	KX258147	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/39/2005	KX258148	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/4/2005	KX258136	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/45/2005	KX258149	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/46/2005	KX258150	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/47/2005	KX258151	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/48/2005	KX258152	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/5/2005	KX258137	Cattle	WRLFMD	Cameroon	SAT2/VII	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
CAR/50/2005	KX258153	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/55/2005	KX258154	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/56/2005	KX258155	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/57/2005	KX258156	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/58/2005	KX258157	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/60/2005	KX258158	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/61/2005	KX258159	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/62/2005	KX258160	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/64/2005	KX258161	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/7/2005	KX258138	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/72/2005	KX258164	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/75/2005	KX258165	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/79/2005	KX258166	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/80/2005	KX258167	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/81/2005	KX258168	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/85/2005	KX258169	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/89/2005	KX258170	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/9/2005	KX258139	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/909/2012 *	KU720582	Cattle	PIADC	Cameroon	SAT2/VII	24735162
CAR/910/2012 *	KU720583	Cattle	PIADC	Cameroon	SAT2/VII	24735162
CAR/911/2012 *	KU720584	Cattle	PIADC	Cameroon	SAT2/VII	24735162
CAR/92/2005	KX258171	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/94/2005	KX258172	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/95/2005	KX258173	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/98/2005	KX258174	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/99/2005	KX258175	Cattle	WRLFMD	Cameroon	SAT2/VII	None
CAR/P12/2000_VDI_44/1	HM211082	Cattle	WRLFMD	Cameroon	SAT2/VII	None
NIG-PL-146-PLBL-001GF-2020 *	OQ401864	Cattle	NVRI	Nigeria	SAT2	None
NIG-PL-147-PLBL-002GF-2020 *	OQ401865	Cattle	NVRI	Nigeria	SAT2	None
NIG-PL-149-PLBL-004GF-2020 *	OQ401867	Cattle	NVRI	Nigeria	SAT2	None
NIG-PL-155-PLBL-010GF-2020 *	OQ401872	Cattle	NVRI	Nigeria	SAT2	None

* Not a WRLFMD Reference Number;

^ Not Available