



FMD Genotyping Reports

Lab Reference WRL batch Number: WRLMEG/2026/000006 & 16, 000015-15 & 18-20

Sent to:



Date Received: 11th April 2026

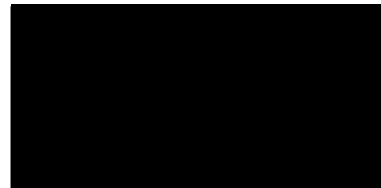
Country of Origin*: Botswana, Eswatini, Lesotho, Zambia, Zimbabwe

These reports have been prepared on behalf of the Botswana Veterinary Institute (BVI) from VP1 sequences kindly supplied from Botswana, Eswatini, Lesotho, Zambia and Zimbabwe.

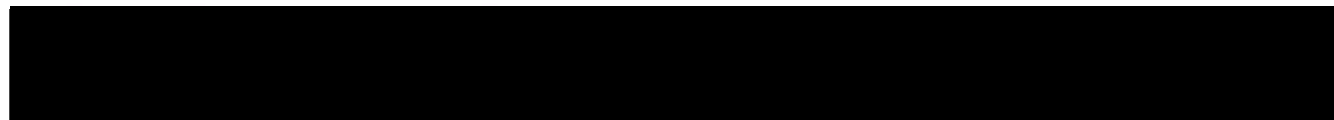
Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:

Official Stamp:

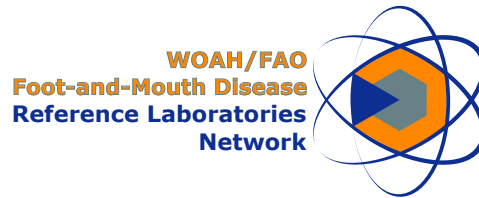


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* Data supplied by the customer



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

FMDV Genotyping Report

Generated from: [FMDtype](#) | FMDV Genotyping Tool

Downloaded on: 24 April 2026

Citation: WRLFMD. 2026. FMDV Genotyping Report [WRLMEG/2026/000015]. (Accessed 24/04/26)

FMDV serotype: SAT2

Country: Zimbabwe

Year: 2025

Batch: WRLMEG/2026/000015

No. of sequences: 4

Reported date: 24 April 2026

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

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from

Virus sample: ZIM01/2025

Sample details

Reception Date:	2026-04-04
Sender reference:	ZIM01/2025
Location of origin:	Bikita District, Masvingo Province
Country of origin:	Zimbabwe
Date of collection:	2025-04-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	I
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591377	ZIM05/2025	Bovine	98.60	0	SAT2	I	None	None
1591378	ZIM06/2025	Bovine	98.60	0	SAT2	I	None	None
1591379	ZIM07/2025	Bovine	98.60	0	SAT2	I	None	None
19108	ZIM/3/2014	Bovine	90.48	0	SAT2	I	None	None
19148	ZIM/5/2014	Bovine	90.48	0	SAT2	I	None	None
19033	ZIM/12/2002	Bovine	90.17	0	SAT2	I	None	None
19125	ZIM/4/2002	Cattle	90.17	0	SAT2	I	None	None
19040	ZIM/13/2002	Bovine	90.02	0	SAT2	I	None	None
19050	ZIM/15/2002	Bovine	90.02	0	SAT2	I	None	None
19072	ZIM/2/2003	Bovine	89.39	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
19045	ZIM/14/2002	Bovine	90.17	0	SAT2	I	None	None
13804	SA/106/59		80.72	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	78.61	0	SAT2	IV	Ken-09	None
18765	RHO/1/48		78.14	0	SAT2	III	None	None
5433	ETH/1/90	Cattle	77.40	0	SAT2	IV	None	None

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

Virus sample: ZIM05/2025

Sample details

Reception Date:	2026-04-04
Sender reference:	ZIM05/2025
Location of origin:	Bikita District, Masvingo Province
Country of origin:	Zimbabwe
Date of collection:	2025-04-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	I
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591378	ZIM06/2025	Bovine	100.00	0	SAT2	I	None	None
1591379	ZIM07/2025	Bovine	100.00	0	SAT2	I	None	None
1591376	ZIM01/2025	Bovine	98.60	0	SAT2	I	None	None
19108	ZIM/3/2014	Bovine	91.11	0	SAT2	I	None	None
19148	ZIM/5/2014	Bovine	91.11	0	SAT2	I	None	None
19033	ZIM/12/2002	Bovine	90.80	0	SAT2	I	None	None
19125	ZIM/4/2002	Cattle	90.80	0	SAT2	I	None	None
19040	ZIM/13/2002	Bovine	90.64	0	SAT2	I	None	None
19050	ZIM/15/2002	Bovine	90.64	0	SAT2	I	None	None
19072	ZIM/2/2003	Bovine	90.02	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
19045	ZIM/14/2002	Bovine	90.80	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	79.57	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	78.05	0	SAT2	IV	None	None

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

Virus sample: ZIM06/2025

Sample details

Reception Date:	2026-04-04
Sender reference:	ZIM06/2025
Location of origin:	Bikita District, Masvingo Province
Country of origin:	Zimbabwe
Date of collection:	2025-04-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	I
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	642
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591377	ZIM05/2025	Bovine	100.00	0	SAT2	I	None	None
1591379	ZIM07/2025	Bovine	100.00	0	SAT2	I	None	None
1591376	ZIM01/2025	Bovine	98.60	0	SAT2	I	None	None
19108	ZIM/3/2014	Bovine	91.11	0	SAT2	I	None	None
19148	ZIM/5/2014	Bovine	91.11	0	SAT2	I	None	None
19033	ZIM/12/2002	Bovine	90.80	0	SAT2	I	None	None
19125	ZIM/4/2002	Cattle	90.80	0	SAT2	I	None	None
19040	ZIM/13/2002	Bovine	90.64	0	SAT2	I	None	None
19050	ZIM/15/2002	Bovine	90.64	0	SAT2	I	None	None
19072	ZIM/2/2003	Bovine	90.02	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
19045	ZIM/14/2002	Bovine	90.80	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	79.57	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	78.05	0	SAT2	IV	None	None

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

Virus sample: ZIM07/2025

Sample details

Reception Date:	2026-04-04
Sender reference:	ZIM07/2025
Location of origin:	Bikita District, Masvingo Province
Country of origin:	Zimbabwe
Date of collection:	2025-04-13
Host species:	bovine

Genotyping details

Serotype:	SAT2
Topotype:	I
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	642
Ambiguities:	0

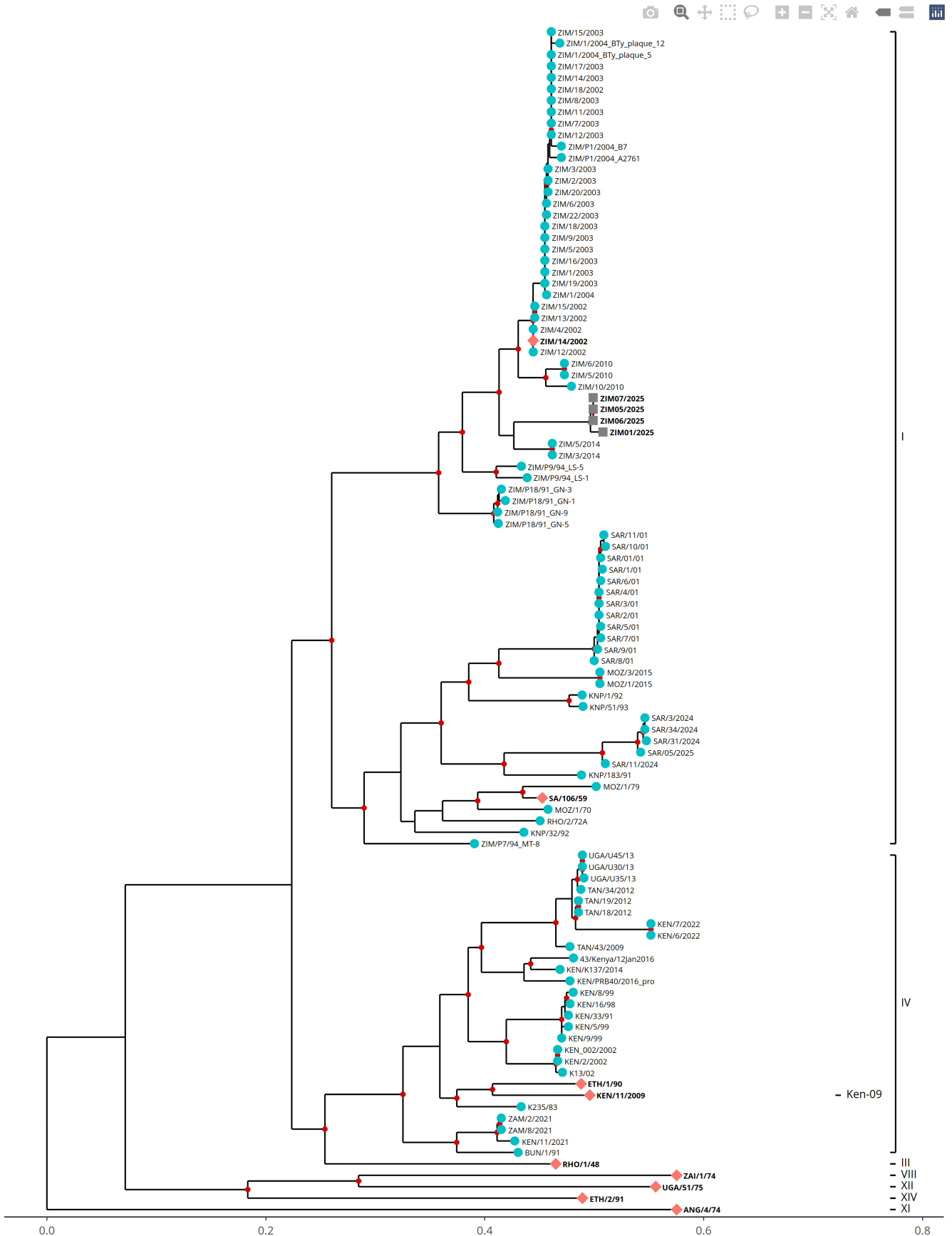
Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591377	ZIM05/2025	Bovine	100.00	0	SAT2	I	None	None
1591378	ZIM06/2025	Bovine	100.00	0	SAT2	I	None	None
1591376	ZIM01/2025	Bovine	98.60	0	SAT2	I	None	None
19108	ZIM/3/2014	Bovine	91.11	0	SAT2	I	None	None
19148	ZIM/5/2014	Bovine	91.11	0	SAT2	I	None	None
19033	ZIM/12/2002	Bovine	90.80	0	SAT2	I	None	None
19125	ZIM/4/2002	Cattle	90.80	0	SAT2	I	None	None
19040	ZIM/13/2002	Bovine	90.64	0	SAT2	I	None	None
19050	ZIM/15/2002	Bovine	90.64	0	SAT2	I	None	None
19072	ZIM/2/2003	Bovine	90.02	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
19045	ZIM/14/2002	Bovine	90.80	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	79.57	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	78.05	0	SAT2	IV	None	None

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

Tree

■ Uploaded sequence
 ● Database sequence
 ◆ Reference sequence



Analysis Parameters

Query sequence set: WRLMEG/2026/000015
Number of related sequences reported: 91
Number of prototype sequences in tree: 9
Minimal VP1 subsequence match length: 610
Sequence alignment length: 648

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
KEN/33/91 *	AY343950	Bovine	OVI	Kenya	SAT2/IV	None
KEN/5/99 *	AF367131		OVI	Kenya	SAT2/IV	12771430
KEN/8/99 *	DQ009729		OVI	Kenya	SAT2/IV	None
KEN/9/99 *	AF367133		OVI	Kenya	SAT2/IV	12771430
KEN/K137/2014 *	MN116692	Bovine	PIADC	Kenya	SAT2/IV	None
KEN/PRB40/2016_pro *	MH882629	African Buffalo	PIADC	Kenya	SAT2/IV	None
KEN_002/2002 *	JF749861		PIADC	Kenya	SAT2/IV	23380590
SAR/05/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
MOZ/1/2015	None	Bovine	WRLFMD	Mozambique	SAT2/I	None
SAR/11/2024 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/31/2024 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/34/2024 *	None	Bovine	OVI	South Africa	SAT2/I	None
MOZ/1/70	KF112959		WRLFMD	Mozambique	SAT2/I	24149511
MOZ/1/79 *	AF367137		OVI	Mozambique	SAT2/I	12771430
MOZ/3/2015	None	Bovine	WRLFMD	Mozambique	SAT2/I	None
RHO/2/72A	KF112962	Cattle	WRLFMD	Rhodesia	SAT2/I	24149511
SAR/01/01 *	KJ999932	Cattle	OVI	South Africa	SAT2/I	None
SAR/1/01 *	AY442903		OVI	South Africa	SAT2/I	None
SAR/10/01 *	AY442912		OVI	South Africa	SAT2/I	None
SAR/11/01 *	AY442913		OVI	South Africa	SAT2/I	None
SAR/2/01 *	AY442904		OVI	South Africa	SAT2/I	None
SAR/3/01 *	AY442905		OVI	South Africa	SAT2/I	None
SAR/4/01 *	AY442906		OVI	South Africa	SAT2/I	None
SAR/5/01 *	AY442907		OVI	South Africa	SAT2/I	None
SAR/6/01 *	AY442908		OVI	South Africa	SAT2/I	None
SAR/7/01 *	AY442909		OVI	South Africa	SAT2/I	None
SAR/8/01 *	AY442910		OVI	South Africa	SAT2/I	None
SAR/9/01 *	AY442911		OVI	South Africa	SAT2/I	None
KNP/1/92 *	AF367114	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/183/91 *	AF367112	African Buffalo	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/32/92 *	AF367115	African Buffalo	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/51/93 *	GU194489	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	None
TAN/18/2012	MF592614	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/19/2012	MF592615	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/34/2012	MF592620	Cattle	WRLFMD	Tanzania	SAT2/IV	None
TAN/43/2009	KF561727	Cattle	WRLFMD	Tanzania	SAT2/IV	None
SAR/3/2024	None	Cattle	WRLFMD	South Africa	SAT2/I	None
UGA/U30/13 *	KP089986	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U35/13 *	KP089987	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
UGA/U45/13 *	KP089988	Bovine	MAKERERE	Uganda	SAT2/IV	25664876
ZIM/1/2003	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/1/2004	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/1/2004_BTy_plaque_12	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/1/2004_BTy_plaque_5	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/10/2010	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/11/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/12/2002	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/12/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/13/2002	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/14/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/15/2002	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/15/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/16/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/17/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/18/2002	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/18/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/19/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/2/2003	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/20/2003	None	Cattle	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/22/2003 *	JF749864	Cattle	PIADC	Zimbabwe	SAT2/I	23380590
ZIM/3/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/3/2014	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
ZIM/4/2002 *	JF749863	Cattle	PIADC	Zimbabwe	SAT2/I	23380590
ZIM/5/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/5/2010	None	Cattle	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/5/2014	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/6/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/6/2010	None	Cattle	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/7/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/8/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/9/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P1/2004_A2761	None	Cattle	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P1/2004_B7	None	Cattle	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P18/91_GN-1	MT385642	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P18/91_GN-3	MT385643	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P18/91_GN-5	MT385644	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P18/91_GN-9	MT385645	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P7/94_MT-8 *	GU194492	African Buffalo	OVI	Zimbabwe	SAT2/I	None
ZIM/P9/94_LS-1	MT385655	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/P9/94_LS-5	MT385656	African Buffalo	WRLFMD	Zimbabwe	SAT2/I	None
ZAM/2/2021	None	Cattle	WRLFMD	Zambia	SAT2/IV	None
ZAM/8/2021	None	Cattle	WRLFMD	Zambia	SAT2/IV	None
BUN/1/91 *	AF367111		OVI	Burundi	SAT2/IV	12771430
KEN/11/2021	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/6/2022	None	Cattle	WRLFMD	Kenya	SAT2/IV	None
KEN/7/2022	None	Pig	WRLFMD	Kenya	SAT2/IV	None
43/Kenya/12Jan2016 *	OM562569	Bovine	KSU	Kenya	SAT2/IV	None
K13/02 *	HM623699	Cattle	MAKERERE	Kenya	SAT2/IV	20614146
K235/83	None		WRLFMD	Kenya	SAT2/IV	None
KEN/16/98 *	AY343962	Bovine	OVI	Kenya	SAT2/IV	None
KEN/2/2002	None	Cattle	WRLFMD	Kenya	SAT2/IV	None

* Not a WRLFMD Reference Number;

· Not Available