



FMD Genotyping Reports

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

Sent to:



Date Received: 11th April 2026

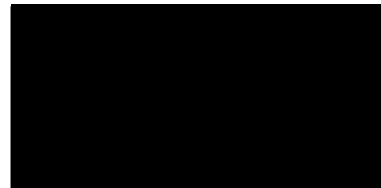
Country of Origin*: Botswana, Eswatini, Lesotho, Zambia, Zimbabwe

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.

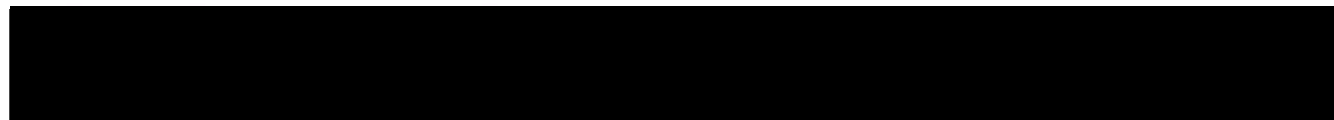
Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:

Official Stamp:

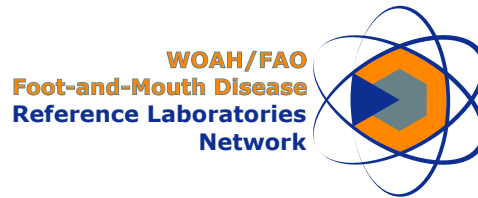


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* Data supplied by the customer



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/2026/000014]. (Accessed 24/04/26)

FMDV serotype: SAT1

Country: Eswatini

Year: 2026

Batch: WRLMEG/2026/000014

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: SWZ05/2026

Sample details

Reception Date:	2026-04-03
Sender reference:	SWA05/2026
Location of origin:	Manzini Region
Country of origin:	Eswatini
Date of collection:	2026-01-15
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	1

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1504221	SWZ18/2025	Bovine	99.70	0	SAT1	III	None	None
1591373	SWZ06/2026	Bovine	99.54	0	SAT1	III	None	None
1591369	BOT54/2026	Bovine	99.24	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.24	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	99.24	0	SAT1	III	None	None
1591374	SWZ07/2026	Bovine	99.09	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	99.09	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.09	0	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.17	0	SAT1	III	None	None
1373867	BOT03/2026	Bovine	98.17	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.37	0	SAT1	III	None	None
11174	MOZ/P13/2010_MOR-16	African Buffalo	76.92	0	SAT1	XIII	None	None
19096	ZIM/23/2003	African Buffalo	75.75	0	SAT1	I	None	None

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

Virus sample: SWZ06/2026

Sample details

Reception Date:	2026-04-03
Sender reference:	SWA06/2026
Location of origin:	Manzini Region
Country of origin:	Eswatini
Date of collection:	2026-01-15
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591369	BOT54/2026	Bovine	99.70	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.70	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	99.70	0	SAT1	III	None	None
1504221	SWZ18/2025	Bovine	99.54	0	SAT1	III	None	None
1591372	SWZ05/2026	Bovine	99.54	1	SAT1	III	None	None
1591374	SWZ07/2026	Bovine	99.54	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	99.54	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.54	0	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.63	0	SAT1	III	None	None
1373867	BOT03/2026	Bovine	98.63	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.24	0	SAT1	III	None	None
11174	MOZ/P13/2010_MOR-16	African Buffalo	76.92	0	SAT1	XIII	None	None
19096	ZIM/23/2003	African Buffalo	75.60	0	SAT1	I	None	None

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

Virus sample: SWZ07/2026

Sample details

Reception Date:	2026-04-03
Sender reference:	SWA07/2026
Location of origin:	Manzini Region
Country of origin:	Eswatini
Date of collection:	2026-01-15
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	III
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1591369	BOT54/2026	Bovine	99.54	0	SAT1	III	None	None
1591373	SWZ06/2026	Bovine	99.54	0	SAT1	III	None	None
1613172	SAR/3/2025	Cattle	99.54	0	SAT1	III	None	None
1613175	SAR/8/2025	Cattle	99.54	0	SAT1	III	None	None
1613173	SAR/6/2025	Pig	99.39	0	SAT1	III	None	None
1613174	SAR/7/2025	Cattle	99.39	0	SAT1	III	None	None
1504221	SWZ18/2025	Bovine	99.09	0	SAT1	III	None	None
1591372	SWZ05/2026	Bovine	99.09	1	SAT1	III	None	None
1373865	BOT01/2026	Bovine	98.48	0	SAT1	III	None	None
1373867	BOT03/2026	Bovine	98.48	0	SAT1	III	None	None
FMDV VP1 Prototype Sequences*								
3410	BOT/1/68	Cattle	84.39	0	SAT1	III	None	None
11174	MOZ/P13/2010_MOR-16	African Buffalo	76.92	0	SAT1	XIII	None	None
19096	ZIM/23/2003	African Buffalo	75.60	0	SAT1	I	None	None

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

Virus sample: SWZ15/2026

Sample details

Reception Date:	2026-04-03
Sender reference:	SWA15/2026
Location of origin:	Manzini Region
Country of origin:	Eswatini
Date of collection:	2026-01-15
Host species:	bovine

Genotyping details

Serotype:	SAT1
Topotype:	II
Lineage:	None
Sublineage:	None

Sequencing details

Material submitted for sequencing:	NA
Material Harvest Date:	NA
Sequence length:	657
Ambiguities:	0

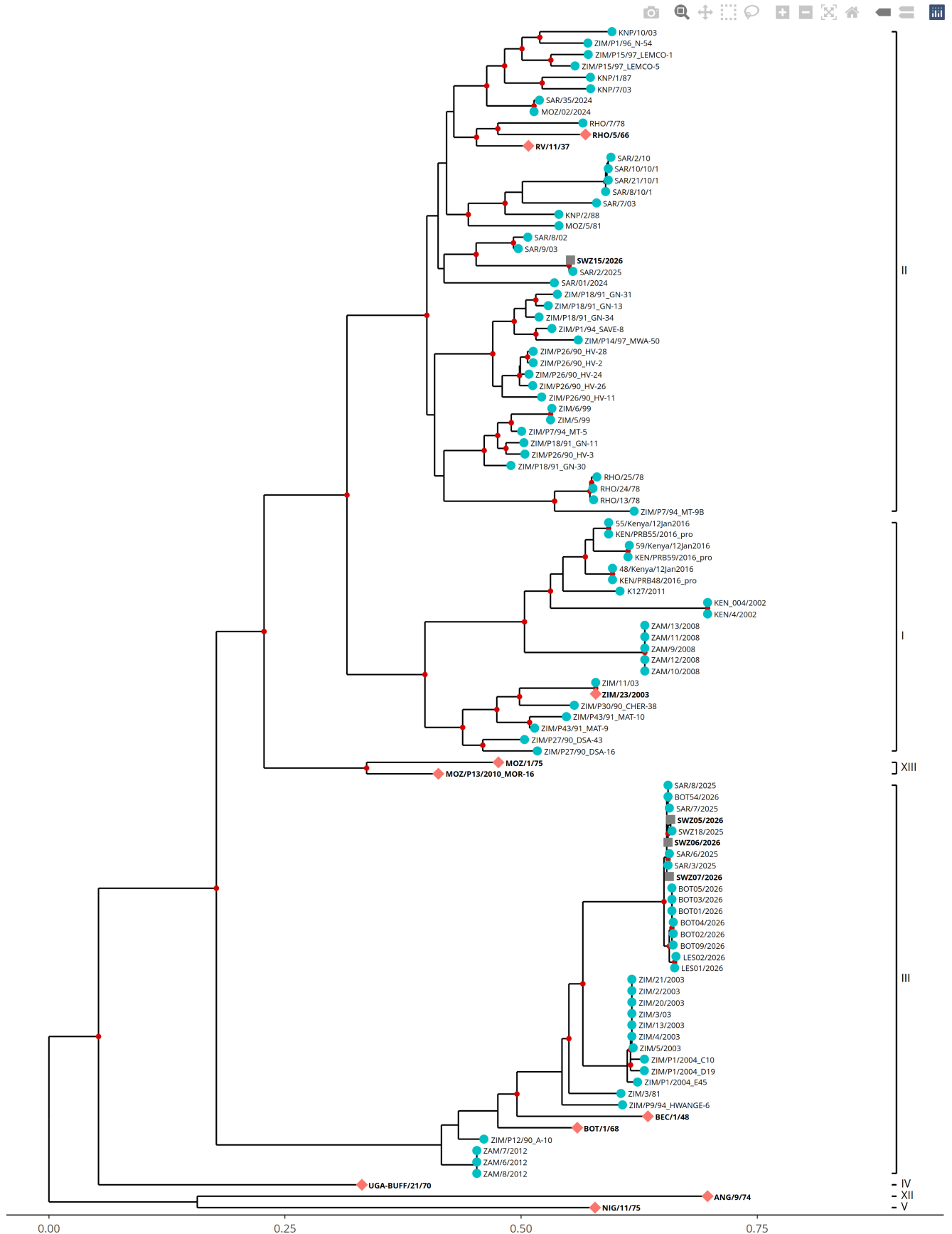
Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1613171	SAR/2/2025	Cattle	99.39	0	SAT1	II	None	None
14012	KNP/11/03	Cattle	90.43	0	SAT1	II	None	None
13942	SAR/9/03	Cattle	89.21	0	SAT1	II	None	None
13937	SAR/8/02	Cattle	88.28	0	SAT1	II	None	None
19328	ZIM/P26/90_HV-30	African Buffalo	85.41	0	SAT1	II	None	None
19324	ZIM/P26/90_HV-29	African Buffalo	85.24	0	SAT1	II	None	None
19158	ZIM/5/99	Cattle	85.08	0	SAT1	II	None	None
14186	KNP/7/03	Cattle	84.95	0	SAT1	II	None	None
19168	ZIM/6/99	Cattle	84.93	0	SAT1	II	None	None
19319	ZIM/P26/90_HV-25	African Buffalo	84.93	0	SAT1	II	None	None
FMDV VP1 Prototype Sequences*								
13415	RV/11/37	Greater Kudu	84.78	0	SAT1	II	None	None
13400	RHO/5/66	Cattle	84.32	0	SAT1	II	None	None
11146	MOZ/1/75	Cattle	76.72	0	SAT1	XIII	None	None

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

Tree

■ Uploaded sequence
 ● Database sequence
 ◆ Reference sequence



Analysis Parameters

Query sequence set: WRLMEG/2026/000014
Number of related sequences reported: 90
Number of prototype sequences in tree: 10
Minimal VP1 subsequence match length: 610
Sequence alignment length: 666

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/4/2002	None	Cattle	WRLFMD	Kenya	SAT1/I	None
KEN/PRB48/2016_pro *	MH882597	African Buffalo	PIADC	Kenya	SAT1/I	None
KEN/PRB55/2016_pro *	MH882600	African Buffalo	PIADC	Kenya	SAT1/I	None
KEN/PRB59/2016_pro *	MH882602	African Buffalo	PIADC	Kenya	SAT1/I	None
KEN_004/2002 *	JF749860		PIADC	Kenya	SAT1/I	23380590
SAR/01/2024 *	None	Bovine	OVI	South Africa	SAT1/II	None
SAR/35/2024 *	None	Bovine	OVI	South Africa	SAT1/II	None
MOZ/5/81	MH053321	Cattle	WRLFMD	Mozambique	SAT1/II	29652800
MOZ/02/2024 *	None	Bovine	BVI	Mozambique	SAT1/II	None
RHO/13/78	None	Cattle	WRLFMD	Rhodesia	SAT1/II	None
RHO/24/78	None	Cattle	WRLFMD	Rhodesia	SAT1/II	None
RHO/25/78	None	Cattle	WRLFMD	Rhodesia	SAT1/II	None
RHO/7/78	None	Cattle	WRLFMD	Rhodesia	SAT1/II	None
BOT01/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT02/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT03/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT04/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT05/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
SAR/2/10 *	KJ999913	Cattle	OVI	South Africa	SAT1/II	None
SAR/7/03 *	KJ999910	Cattle	OVI	South Africa	SAT1/II	None
SAR/8/02 *	KJ999909	Cattle	OVI	South Africa	SAT1/II	None
SAR/9/03 *	KJ999911	Cattle	OVI	South Africa	SAT1/II	None
KNP/1/87	None	African Buffalo	WRLFMD	South Africa (Kruger National Park)	SAT1/II	None
KNP/10/03 *	KJ999916	Cattle	OVI	South Africa (Kruger National Park)	SAT1/II	None
KNP/2/88	None	African Buffalo	WRLFMD	South Africa (Kruger National Park)	SAT1/II	None
KNP/7/03 *	KJ999915	Cattle	OVI	South Africa (Kruger National Park)	SAT1/II	None
SWZ18/2025 *	None	Bovine	BVI	Eswatini	SAT1/III	None
BOT09/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
BOT54/2026 *	None	Bovine	BVI	Botswana	SAT1/III	None
LES01/2026 *	None	Bovine	BVI	Lesotho	SAT1/III	None
LES02/2026 *	None	Bovine	BVI	Lesotho	SAT1/III	None
SAR/2/2025	None	Cattle	WRLFMD	South Africa	SAT1/II	None
SAR/3/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
SAR/6/2025	None	Pig	WRLFMD	South Africa	SAT1/III	None
SAR/7/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
SAR/8/2025	None	Cattle	WRLFMD	South Africa	SAT1/III	None
ZAM/10/2008	None	Cattle	WRLFMD	Zambia	SAT1/I	None
ZAM/11/2008	None	Cattle	WRLFMD	Zambia	SAT1/I	None
ZAM/12/2008	None	Cattle	WRLFMD	Zambia	SAT1/I	None
ZAM/13/2008	None	Cattle	WRLFMD	Zambia	SAT1/I	None
ZAM/6/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/7/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/8/2012	None	Bovine	WRLFMD	Zambia	SAT1/III	None
ZAM/9/2008	None	Cattle	WRLFMD	Zambia	SAT1/I	None
ZIM/11/03 *	KJ999927	African Buffalo	OVI	Zimbabwe	SAT1/I	None
ZIM/13/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/2/2003	None	Bovine	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/20/2003	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/21/2003	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/3/03 *	KJ999926	Cattle	OVI	Zimbabwe	SAT1/III	None
ZIM/3/81	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/4/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/5/2003	None		WRLFMD	Zimbabwe	SAT1/III	None
ZIM/5/99	None	Cattle	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/6/99	None	Cattle	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P1/2004_C10	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/2004_D19	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/2004_E45	None	Cattle	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P1/94_SAVE-8	MT385601	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P1/96_N-54	MT385613	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P12/90_A-10	MT385532	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
ZIM/P14/97_MWA-50	MT385614	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None

FMDV VP1 Sequences included in the Phylogenetic Tree (continued)

Sequence Name	GenBank Accession	Host	Ref Lab	Country	FMDV Taxonomy	Pubmed Reference Number
ZIM/P15/97_LEMCO-1	MT385615	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P15/97_LEMCO-5	MT385616	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-11	MT385569	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-13 *	GU194497	African Buffalo	OVI	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-30	MT385576	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-31	MT385577	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P18/91_GN-34	MT385578	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-11	MT385535	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-2	MT385533	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-24	MT385537	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-26	MT385539	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-28	MT385540	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P26/90_HV-3	MT385534	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P27/90_DSA-16	MT385545	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P27/90_DSA-43	MT385553	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P30/90_CHER-38	MT385566	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-10	MT385592	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P43/91_MAT-9	MT385591	African Buffalo	WRLFMD	Zimbabwe	SAT1/I	None
ZIM/P7/94_MT-5	MT385602	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P7/94_MT-9B	MT385603	African Buffalo	WRLFMD	Zimbabwe	SAT1/II	None
ZIM/P9/94_HWANGE-6	MT385605	African Buffalo	WRLFMD	Zimbabwe	SAT1/III	None
SAR/8/10/1 *	MT227872	Zebu	OVI	South Africa	SAT1/II	None
SAR/10/10/1 *	MT227873	Zebu	OVI	South Africa	SAT1/II	None
SAR/21/10/1 *	MT227874	Zebu	OVI	South Africa	SAT1/II	None
48/Kenya/12Jan2016 *	OM562571	Bovine	KSU	Kenya	SAT1/I	None
55/Kenya/12Jan2016 *	OM562576	Bovine	KSU	Kenya	SAT1/I	None
59/Kenya/12Jan2016 *	OM562579	Bovine	KSU	Kenya	SAT1/I	None
K127/2011 *	KP263445	Cattle	EMBAKASI	Kenya	SAT1/I	25644407

* Not a WRLFMD Reference Number;

† Not Available