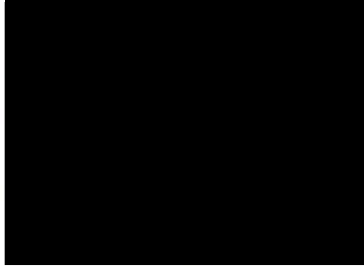




FMD Genotyping Reports

Lab Reference WRL batch Number: WRLFMD/2026/000001

Sender Details:



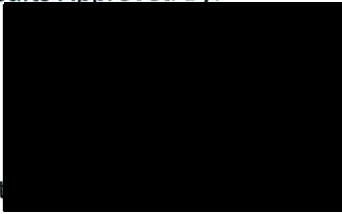
Date Received: 28th January 2026

Country of Origin*: South Africa

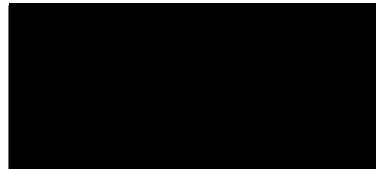
Work has now been completed in respect of the samples recently submitted and the details are as attached.

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

Results Approved By:



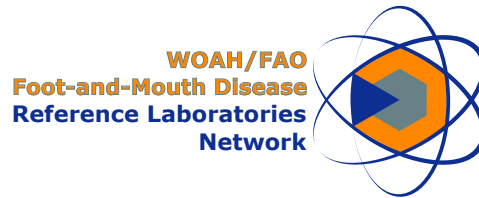
Official Stamp:



Date

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: 13 February 2026

Citation: WRLFMD. 2026. FMDV Genotyping Report [WRLFMD/2026/000001]. (Accessed 13/02/26)

FMDV serotype: SAT2

Country: South Africa

Year: 2024-2025

Batch: WRLFMD/2026/000001

No. of sequences: 3

Reported date: 13 February 2026

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

Email: reporting@pirbright.ac.uk

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FMDtype is supported through funding from



Virus sample: SAR/3/2024

Sample details

Reception Date:	2026-01-28
Sender reference:	24/2496
Location of origin:	Pongola, Vryheid, KwaZulu-Natal
Country of origin:	South Africa
Date of collection:	2024-11-11
Host species:	cattle

Genotyping details

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

Sequencing details

Material submitted for sequencing:	WRL-LFBK1
Material Harvest Date:	NA
Sequence length:	642
Ambiguities:	1

Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1114159	SAR/34/2024	Bovine	99.84	0	SAT2	I	None	None
1114156	SAR/10/2024	Bovine	99.53	0	SAT2	I	None	None
1092638	SZ/01/2025	Bovine	99.38	0	SAT2	I	None	None
1114158	SAR/31/2024	Bovine	99.38	0	SAT2	I	None	None
1092632	SAR/01/2025	Bovine	98.91	0	SAT2	I	None	None
1092633	SAR/03/2025	Bovine	98.91	0	SAT2	I	None	None
1092635	SAR/05/2025	Bovine	98.91	0	SAT2	I	None	None
1092634	SAR/04/2025	Bovine	98.75	0	SAT2	I	None	None
1092636	SAR/06/2025	Bovine	98.60	0	SAT2	I	None	None
1092637	SAR/07/2025	Bovine	98.60	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
13804	SA/106/59		83.36	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	80.63	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	78.76	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	78.55	0	SAT2	IV	None	None
18765	RHO/1/48		78.14	0	SAT2	III	None	None

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

Virus sample: SAR/1/2025

Sample details

Reception Date:	2026-01-28
Sender reference:	25/2312-2
Location of origin:	Orkney, North West
Country of origin:	South Africa
Date of collection:	2025-07-16
Host species:	cattle

Genotyping details

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

Sequencing details

Material submitted for sequencing:	OS and WRL-LFBK1
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								
1092637	SAR/07/2025	Bovine	99.69	0	SAT2	I	None	None
1092632	SAR/01/2025	Bovine	99.38	0	SAT2	I	None	None
1092634	SAR/04/2025	Bovine	99.22	0	SAT2	I	None	None
1092636	SAR/06/2025	Bovine	99.06	0	SAT2	I	None	None
1114158	SAR/31/2024	Bovine	98.60	0	SAT2	I	None	None
1092633	SAR/03/2025	Bovine	98.44	0	SAT2	I	None	None
1114156	SAR/10/2024	Bovine	98.44	0	SAT2	I	None	None
1114159	SAR/34/2024	Bovine	98.44	0	SAT2	I	None	None
1092638	SZ/01/2025	Bovine	97.97	0	SAT2	I	None	None
1092635	SAR/05/2025	Bovine	97.82	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
13804	SA/106/59		83.52	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	80.16	0	SAT2	I	None	None
18765	RHO/1/48		78.95	0	SAT2	III	None	None
9892	KEN/11/2009	Cattle	78.48	0	SAT2	IV	Ken-09	None
5433	ETH/1/90	Cattle	78.27	0	SAT2	IV	None	None

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

Virus sample: SAR/4/2025

Sample details

Reception Date:	2026-01-28
Sender reference:	25/5595-1
Location of origin:	Marquard, Free State
Country of origin:	South Africa
Date of collection:	2025-11-07
Host species:	cattle

Genotyping details

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

Sequencing details

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

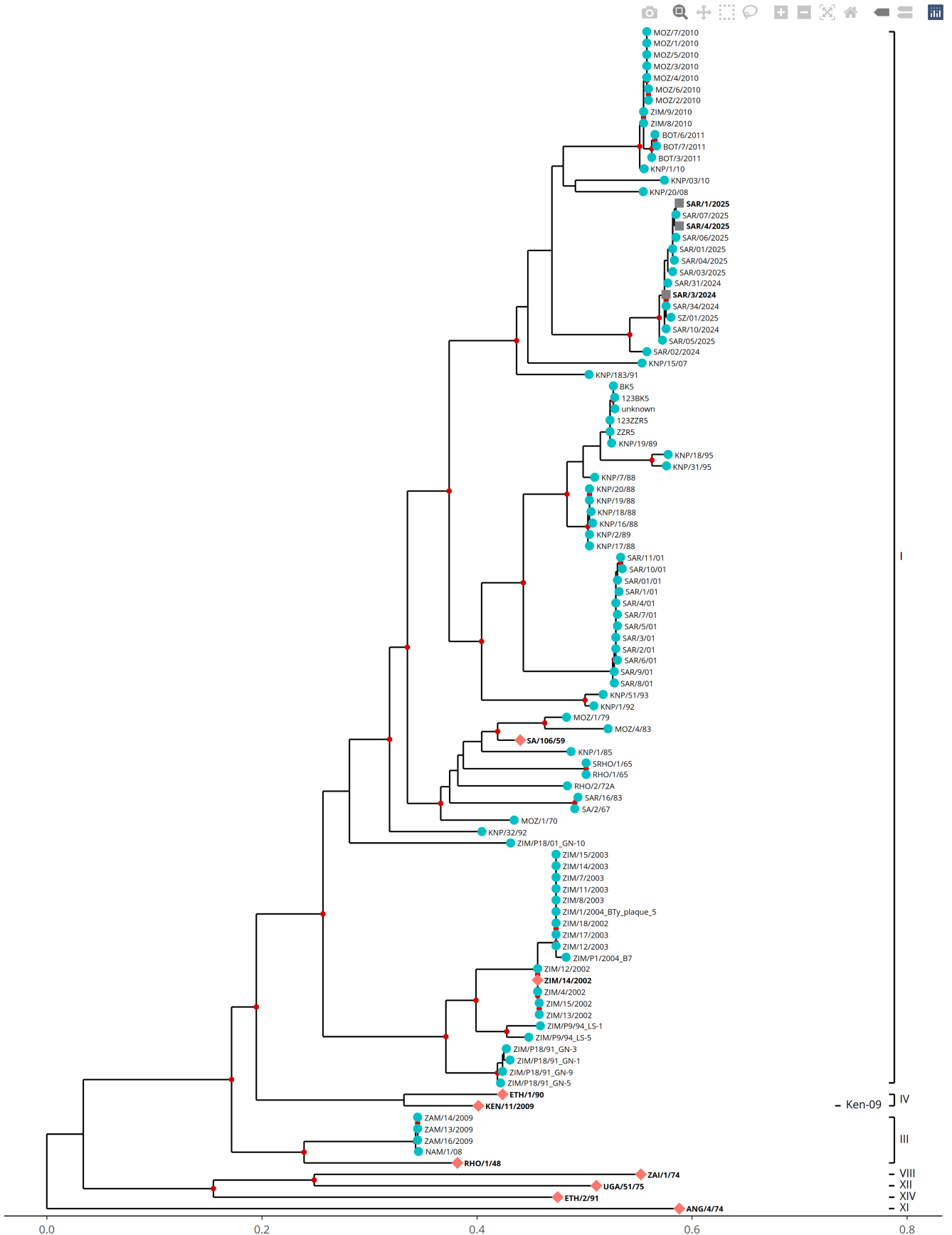
Most Closely Related FMDV Isolates

Sequence ID	Virus Name	Host	% Id	#Ambig.	Serotype	Topotype	Lineage	Sublineage
FMDV VP1 Sequences								
1092632	SAR/01/2025	Bovine	99.38	0	SAT2	I	None	None
1092637	SAR/07/2025	Bovine	99.38	0	SAT2	I	None	None
1092634	SAR/04/2025	Bovine	99.22	0	SAT2	I	None	None
1092636	SAR/06/2025	Bovine	99.06	0	SAT2	I	None	None
1114158	SAR/31/2024	Bovine	98.60	0	SAT2	I	None	None
1092633	SAR/03/2025	Bovine	98.44	0	SAT2	I	None	None
1114156	SAR/10/2024	Bovine	98.44	0	SAT2	I	None	None
1114159	SAR/34/2024	Bovine	98.44	0	SAT2	I	None	None
1092638	SZ/01/2025	Bovine	97.97	0	SAT2	I	None	None
1092635	SAR/05/2025	Bovine	97.82	0	SAT2	I	None	None
FMDV VP1 Prototype Sequences*								
13804	SA/106/59		83.36	0	SAT2	I	None	None
19045	ZIM/14/2002	Bovine	80.47	0	SAT2	I	None	None
9892	KEN/11/2009	Cattle	78.83	0	SAT2	IV	Ken-09	None
18765	RHO/1/48		78.64	0	SAT2	III	None	None
5433	ETH/1/90	Cattle	78.12	0	SAT2	IV	None	None

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

Tree

■ Uploaded sequence
 ● Database sequence
 ◆ Reference sequence



Analysis Parameters

Query sequence set: WRLFMD/2026/000001
Number of related sequences reported: 92
Number of prototype sequences in tree: 9
Minimal VP1 subsequence match length: 610
Sequence alignment length: 652

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
SAR/01/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/03/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/04/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/05/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/06/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/07/2025 *	None	Bovine	OVI	South Africa	SAT2/I	None
SZ/01/2025 *	None	Bovine	OVI	Eswatini	SAT2/I	None
MOZ/1/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
SAR/02/2024 *	None	Bovine	OVI	South Africa	SAT2/I	None
SAR/10/2024 *	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/2/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
MOZ/3/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
MOZ/4/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
MOZ/4/83 *	AF367101		OVI	Mozambique	SAT2/I	12771430
MOZ/5/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
MOZ/6/2010	None	Cattle	WRLFMD	Mozambique	SAT2/I	None
MOZ/7/2010	None		WRLFMD	Mozambique	SAT2/I	None
NAM/1/08 *	KJ999938	Cattle	OVI	Namibia	SAT2/III	None
ZIM/P18/01_GN-10 *	GU194493	African Buffalo	OVI	Zimbabwe	SAT2/I	None
RHO/1/65	None		WRLFMD	Rhodesia	SAT2/I	None
RHO/2/72A	KF112962	Cattle	WRLFMD	Rhodesia	SAT2/I	24149511
SA/2/67	KF112965	Impala	WRLFMD	South Africa	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/16/83 *	DQ009734	Impala	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
123BK5 *	KR108955		OVI	South Africa (Kruger National Park)	SAT2/I	None
123ZZR5 *	KR108956		OVI	South Africa (Kruger National Park)	SAT2/I	None
BK5 *	KR108957		OVI	South Africa (Kruger National Park)	SAT2/I	None
KNP/03/10 *	KJ999936	Cattle	OVI	South Africa (Kruger National Park)	SAT2/I	None
KNP/1/10 *	KJ999935	African Buffalo	OVI	South Africa (Kruger National Park)	SAT2/I	None
KNP/1/85	KF112958	Impala	WRLFMD	South Africa (Kruger National Park)	SAT2/I	24149511
KNP/1/92 *	AF367114	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/15/07 *	KJ999933	Cattle	OVI	South Africa (Kruger National Park)	SAT2/I	None
KNP/16/88 *	AF367104	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/17/88 *	AF367105	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/18/88 *	AF367138	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/18/95 *	AF367118	African Buffalo	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/19/88 *	AF367106	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/19/89 *	AF367110	African Buffalo	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/2/89 *	AF367109	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/20/08 *	KJ999934	Cattle	OVI	South Africa (Kruger National Park)	SAT2/I	None
KNP/20/88 *	AF367107	Impala	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
KNP/31/95 *	AF367119	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
KNP/7/88 *	AF367103	African Buffalo	OVI	South Africa (Kruger National Park)	SAT2/I	12771430
unknown *	KR108963		OVI	South Africa (Kruger National Park)	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
ZZR5 *	KR108958		OVI	South Africa (Kruger National Park)	SAT2/I	None
ZAM/13/2009	None	Cattle	WRLFMD	Zambia	SAT2/III	None
ZAM/14/2009	None	Cattle	WRLFMD	Zambia	SAT2/III	None
ZAM/16/2009	None	Cattle	WRLFMD	Zambia	SAT2/III	None
SRHO/1/65	MH053335	Cattle	WRLFMD	Zimbabwe	SAT2/I	29652800
ZIM/1/2004_BTy_plaque_5	None		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/17/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/18/2002	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/4/2002 *	JF749863	Cattle	PIADC	Zimbabwe	SAT2/I	23380590
ZIM/7/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/8/2003	None		WRLFMD	Zimbabwe	SAT2/I	None
ZIM/8/2010	None	Bovine	WRLFMD	Zimbabwe	SAT2/I	None
ZIM/9/2010	None	Bovine	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/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
BOT/3/2011	None	Cattle	WRLFMD	Botswana	SAT2/I	None
BOT/6/2011	None	Cattle	WRLFMD	Botswana	SAT2/I	None
BOT/7/2011	None	Cattle	WRLFMD	Botswana	SAT2/I	None

* Not a WRLFMD Reference Number;

^ Not Available