

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

## Genotyping Report

FMDV serotype: O  
Country: Uganda  
Year: 2019  
Batch: WRLFMD/2019/00009  
No. of sequences: 8  
Report date: 8th March 2019  
Report generated by: Nick Knowles  
Report checked by: Jemma Wadsworth



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email: [reporting@pirbright.ac.uk](mailto:reporting@pirbright.ac.uk)

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Virus sample name:	UGA/6/2019
Sender reference:	D1950/03 Kagabo
Location of origin:	Kagabo
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	07/03/2019
VIBASys IDs: sample 40502, genome 40503, sequence viba_40504, sequencing info 40505	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	100.0	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	100.0	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	100.0	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	100.0	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.8	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.7	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.8	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.8	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.7	0	O	EA-2		

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_221	MAL/1/98		87.1	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_491	TUR/257/2008		83.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	83.4	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	UGA/10/2019
Sender reference:	D1950/05 Kahuga
Location of origin:	Kahuga
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	27/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	07/03/2019
VIBASys IDs: sample 40506, genome 40507, sequence viba_40508, sequencing info 40509	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	99.7	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	99.7	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	99.7	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	99.7	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	99.7	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.5	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.5	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.5	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.5	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.4	0	O	EA-2		

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.1	0	O	EA-2		
viba_221	MAL/1/98		86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		83.7	0	O	ME-SA	PanAsia-2	TER-08
viba_766	IRN/31/2009	cattle	83.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	83.6	0	O	EA-3		
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	

Virus sample name:	UGA/13/2019
Sender reference:	D1950/06 Ruhuga
Location of origin:	Ruhuga
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	27/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	07/03/2019
VIBASys IDs: sample 40510, genome 40511, sequence viba_40512, sequencing info 40513	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	100.0	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	100.0	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	100.0	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	100.0	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.8	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.7	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.8	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.8	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.7	0	O	EA-2		

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_221	MAL/1/98		87.1	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_491	TUR/257/2008		83.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	83.4	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	UGA/14/2019
Sender reference:	D1950/06 Ruhuga
Location of origin:	Ruhuga
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	28/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	07/03/2019
VIBASys IDs: sample 40514, genome 40515, sequence viba_40516, sequencing info 40517	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	100.0	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	100.0	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	100.0	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	100.0	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.8	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.7	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.8	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.8	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.7	0	O	EA-2		

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_221	MAL/1/98		87.1	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_491	TUR/257/2008		83.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	83.4	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	UGA/16/2019
Sender reference:	D1950/07 Rugabo
Location of origin:	Rugabo
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	27/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	07/03/2019
VIBASys IDs: sample 40518, genome 40519, sequence viba_40520, sequencing info 40521	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	99.8	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	99.8	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	99.8	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	99.8	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.7	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.5	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.7	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.7	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.5	0	O	EA-2		

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.7	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.7	0	O	EA-2		
viba_221	MAL/1/98		87.2	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.9	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.5	0	O	EA-3		
viba_719	IRN/88/2009		83.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_285	UKG/35/2001	porcine	83.6	0	O	ME-SA	PanAsia	
viba_491	TUR/257/2008		83.5	0	O	ME-SA	PanAsia-2	TER-08
viba_766	IRN/31/2009	cattle	83.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_617	IND/53/79	bovine	83.4	0	O	ME-SA		

Virus sample name:	UGA/19/2019
Sender reference:	D1950/08 Kagabo
Location of origin:	Kagabo
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	08/03/2019
VIBASys IDs: sample 40522, genome 40523, sequence viba_40524, sequencing info 40525	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	100.0	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	100.0	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	100.0	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	100.0	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.8	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.7	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.8	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.8	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.7	0	O	EA-2		

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_221	MAL/1/98		87.1	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_491	TUR/257/2008		83.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	83.4	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	UGA/21/2019
Sender reference:	D1950/09 Kozi
Location of origin:	Kozi
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	08/03/2019
VIBASys IDs: sample 40526, genome 40527, sequence viba_40528, sequencing info 40529	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40512	UGA/13/2019	bovine	100.0	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	100.0	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	100.0	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	100.0	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.8	0	O	EA-2		
viba_40532	UGA/27/2019	bovine	99.8	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.7	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.8	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.8	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.7	0	O	EA-2		

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.5	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.6	0	O	EA-2		
viba_221	MAL/1/98		87.1	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.6	0	O	EA-3		
viba_719	IRN/88/2009		83.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_491	TUR/257/2008		83.4	0	O	ME-SA	PanAsia-2	TER-08
viba_285	UKG/35/2001	porcine	83.4	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09



Virus sample name:	UGA/27/2019
Sender reference:	D1950/11 - 02/02Kasiina
Location of origin:	Kasiina
Country of origin:	Uganda
Date of collection:	31/01/2019
Host species:	bovine
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	28/02/2019
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	05/03/2019
Created:	07/03/2019
Last updated:	08/03/2019
VIBASys IDs: sample 40530, genome 40531, sequence viba_40532, sequencing info 40533	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40528	UGA/21/2019	bovine	99.8	0	O	EA-2		
viba_40512	UGA/13/2019	bovine	99.8	0	O	EA-2		
viba_40504	UGA/6/2019	bovine	99.8	0	O	EA-2		
viba_40524	UGA/19/2019	bovine	99.8	0	O	EA-2		
viba_40516	UGA/14/2019	bovine	99.8	0	O	EA-2		
viba_40520	UGA/16/2019	bovine	99.7	0	O	EA-2		
viba_40508	UGA/10/2019	bovine	99.5	0	O	EA-2		
viba_35569	KEN/4/2017	cattle	96.7	0	O	EA-2		
viba_37401	KEN/15/2017	bovine	96.7	0	O	EA-2		
viba_35573	KEN/5/2017	cattle	96.5	0	O	EA-2		

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		90.4	0	O	EA-2		
viba_74	KEN/5/2002	bovine	89.4	0	O	EA-2		
viba_221	MAL/1/98		86.9	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.9	0	O	EA-2		
viba_116	SUD/2/86	bovine	84.5	0	O	EA-3		
viba_719	IRN/88/2009		83.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		83.5	0	O	ME-SA	PanAsia-2	TER-08
viba_766	IRN/31/2009	cattle	83.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_359	Manisa/TUR/69		83.4	0	O	ME-SA		
viba_505	TUR/264/2009		83.4	0	O	ME-SA	PanAsia-2	SAN-09

Report on FMDV O in Uganda in 2019

Batch: WRLFMD/2019/00009



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor: vp1\_O  
 Query sequence set: WRLFMD/2019/00009-Uganda-O (8 sequences)  
 Sequence database set: allseqs\_O (4336 sequences)  
 Prototype sequence set: !prototypes\_O (49 sequences)  
 Number of related sequences reported: 10  
 Minimal VP1 subsequence match length: 600  
 Sequence alignment method: muscle (default parameters)  
 Sequence alignment length: 636  
 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/O

label	accession	host(s)	lab	country	taxonomic information
UGA/10/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/27/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/16/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/6/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/21/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/19/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/13/2019	n/a	bovine	WRLFMD	Uganda	EA-2
UGA/14/2019	n/a	bovine	WRLFMD	Uganda	EA-2
KEN/4/2017	n/a	cattle	WRLFMD	Kenya	EA-2
KEN/5/2017	n/a	cattle	WRLFMD	Kenya	EA-2
KEN/6/2017	n/a	cattle	WRLFMD	Kenya	EA-2
KEN/15/2017	n/a	bovine	WRLFMD	Kenya	EA-2
KUM-27-P 2014 UG*	KY548478	cattle	PIADC	Uganda	EA-2
BKD-005-P 2014 UG*	KY548425	cattle	PIADC	Uganda	EA-2
KUM-025-P 2014 UG*	KY548476	cattle	PIADC	Uganda	EA-2
NGO-372-P UG*	KY558336	cattle	PIADC	Uganda	EA-2
BDK-058-P UG*	KY548418	cattle	PIADC	Uganda	EA-2
BDK-012-P UG*	KY548413	cattle	PIADC	Uganda	EA-2
BDK-203-P UG*	KY548424	cattle	PIADC	Uganda	EA-2
BDK-034-P UG*	KY548415	cattle	PIADC	Uganda	EA-2
BDK-025-P UG*	KY548414	cattle	PIADC	Uganda	EA-2
KUM-026-P 2014 UG*	KY548477	cattle	PIADC	Uganda	EA-2
KAB-394-P 2014 UG*	KY548473	cattle	PIADC	Uganda	EA-2
KAB-117-P 2014 UG*	KY548464	cattle	PIADC	Uganda	EA-2
KAB-219-P 2014 UG*	KY548466	cattle	PIADC	Uganda	EA-2
KAB-267-P 2014 UG*	KY548468	cattle	PIADC	Uganda	EA-2
KAB-177-P 2014 UG*	KY548465	cattle	PIADC	Uganda	EA-2
KAB-361-P 2014 UG*	KY548470	cattle	PIADC	Uganda	EA-2
KAB-375-P 2014 UG*	KY548472	cattle	PIADC	Uganda	EA-2
KAB-223-P 2014 UG*	KY548467	cattle	PIADC	Uganda	EA-2
KAB-50-P 2014 UG*	KY548463	cattle	PIADC	Uganda	EA-2
KAB-330-P 2014 UG*	KY548469	cattle	PIADC	Uganda	EA-2
KAB-367-P 2014 UG*	KY548471	cattle	PIADC	Uganda	EA-2
BUG-62-P UG*	KY548432	cattle	PIADC	Uganda	EA-2
BUG-77-P UG*	KY548438	cattle	PIADC	Uganda	EA-2
BUG-69-P UG*	KY548435	cattle	PIADC	Uganda	EA-2

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
BUG-82-P UG*	KY548439	cattle	PIADC	Uganda	EA-2
BUG-89-P UG*	KY548440	cattle	PIADC	Uganda	EA-2
BUG-76-P UG*	KY548437	cattle	PIADC	Uganda	EA-2
BUG-57-P UG*	KY548431	cattle	PIADC	Uganda	EA-2
NKP-46-P 2014 UG*	KY558314	cattle	PIADC	Uganda	EA-2
NKP-79-P 2014 UG*	KY558315	cattle	PIADC	Uganda	EA-2
NKP-29-P 2014 UG*	KY558313	cattle	PIADC	Uganda	EA-2
NKP/S3/016-P 2014 UG*	KY558312	cattle	PIADC	Uganda	EA-2
MAN-007-P 2014 UG*	KY558308	cattle	PIADC	Uganda	EA-2
MAN-014-P 2014 UG*	KY558311	cattle	PIADC	Uganda	EA-2
MAN-009-P 2014 UG*	KY558309	cattle	PIADC	Uganda	EA-2
MAN-020-P 2014 UG*	KY558310	cattle	PIADC	Uganda	EA-2
BUD-002-P 2014 UG*	KY548428	cattle	PIADC	Uganda	EA-2
BUD-009-P 2014 UG*	KY548429	cattle	PIADC	Uganda	EA-2
BKD-018-P 2014 UG*	KY548427	cattle	PIADC	Uganda	EA-2
KUM-010-P 2014 UG*	KY548475	cattle	PIADC	Uganda	EA-2
SER-261-P UG*	KY558319	cattle	PIADC	Uganda	EA-2
SER-298-P UG*	KY558322	cattle	PIADC	Uganda	EA-2
SER-238-P UG*	KY558316	cattle	PIADC	Uganda	EA-2
SER-284-P UG*	KY558321	cattle	PIADC	Uganda	EA-2
SER-258-P UG*	KY558317	cattle	PIADC	Uganda	EA-2
SER-269-P UG*	KY558320	cattle	PIADC	Uganda	EA-2
SER-260-P UG*	KY558318	cattle	PIADC	Uganda	EA-2
BUG-55-P UG*	KY548430	cattle	PIADC	Uganda	EA-2
ALB-F2-008-P 2014 UG*	KY548410	cattle	PIADC	Uganda	EA-2
ALB-F4-018-P 2014 UG*	KY548405	cattle	PIADC	Uganda	EA-2
ALB-F1-001-P 2014 UG*	KY548406	cattle	PIADC	Uganda	EA-2
ALB-F2-007-P 2014 UG*	KY548409	cattle	PIADC	Uganda	EA-2
ALB-F2-004-P 2014 UG*	KY548408	cattle	PIADC	Uganda	EA-2
MBE-2-T 2014 UG*	KY558283	cattle	PIADC	Uganda	EA-2
BKD-016-P 2014 UG*	KY548426	cattle	PIADC	Uganda	EA-2
ALB-F3-008-P 2014 UG*	KY548411	cattle	PIADC	Uganda	EA-2
MBE-2-P 2014 UG*	KY558282	cattle	PIADC	Uganda	EA-2
BDK-069-P/UG*	KY548419	cattle	PIADC	Uganda	EA-2
BDK-193-P UG*	KY548423	cattle	PIADC	Uganda	EA-2
BDK-192-P UG*	KY548422	cattle	PIADC	Uganda	EA-2
BDK-73-P UG*	KY548420	cattle	PIADC	Uganda	EA-2
BDK-075-P UG*	KY548421	cattle	PIADC	Uganda	EA-2
BDK-054-P UG*	KY548416	cattle	PIADC	Uganda	EA-2
BDK-055-P UG*	KY548417	cattle	PIADC	Uganda	EA-2
ALB-F4-060-P 2014 UG*	KY548412	cattle	PIADC	Uganda	EA-2
MBE-3-T 2014 UG*	KY558284	cattle	PIADC	Uganda	EA-2
MBE-1-P 2014 UG*	KY558281	cattle	PIADC	Uganda	EA-2
MAL/1/98	DQ165074	n/a	WRLFMD	Malawi	EA-2
TAN/2/2004	KF561679	bovine	WRLFMD	Tanzania	EA-2
KEN/5/2002	DQ165073	bovine	WRLFMD	Kenya	EA-2
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
TUR/257/2008*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/TER-08
TUR/264/2009*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/SAN-09
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
ETH/2/2006	FJ798127	bovine	WRLFMD	Ethiopia	EA-3
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

\*, not a WRLFMD Reference Number

n/a, not available