

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

Genotyping Report

FMDV serotype: O
Country: Uganda
Year: 2016
Batch: WRLMEG/2020/00003A
No. of sequences: 10
Report date: 20th January 2020
Report generated by: Nick Knowles
Report checked by: Antonello Di Nardo



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www: <http://www.wrlfmd.org/>

email: reporting@pirbright.ac.uk

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Virus sample name:	APA-020-P/UGA/2016
Sender reference:	O/APA-020-P
Location of origin:	Apac, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43415, genome 43416, sequence viba_43417, sequencing info 43418	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.3	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.9	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.9	0	O	EA-2		
viba_221	MAL/1/98		88.2	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.1	0	O	EA-2		
viba_576	IND/R2/75		85.3	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.9	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.7	0	O	ME-SA	Ind-2001	e
viba_705	KUW/3/97	bovine	84.3	0	O	ME-SA	Ind-2001	a
viba_491	TUR/257/2008		84.3	0	O	ME-SA	PanAsia-2	TER-08

Virus sample name:	APA-067-P/UGA/2016
Sender reference:	O/APA-067-P
Location of origin:	Apac, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43427, genome 43428, sequence viba_43429, sequencing info 43430	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43417	APA-020-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_43585	KRD-070-P/UGA/2016	cattle	98.4	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	98.4	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	98.3	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	98.3	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	98.3	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	98.1	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	97.5	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	97.0	0	O	EA-2		

Most Closely Related Prototype Sequences

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

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		87.0	0	O	EA-2		
viba_263	TAN/2/2004	bovine	85.9	0	O	EA-2		
viba_576	IND/R2/75		83.9	0	O	ME-SA		
viba_354	PAK/16/2010	cattle	83.8	0	O	ME-SA	PanAsia-2	PUN-10
viba_766	IRN/31/2009	cattle	83.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_523	K83/79		83.5	0	O	EA-1		
viba_30238	MUR/19/2016	cattle	83.2	0	O	ME-SA	Ind-2001	e
viba_705	KUW/3/97	bovine	83.2	0	O	ME-SA	Ind-2001	a

Virus sample name:	APA-254-P/UGA/2016
Sender reference:	O/APA-254-P
Location of origin:	Apac, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43491, genome 43492, sequence viba_43493, sequencing info 43494	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.2	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.2	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	97.9	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	97.9	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.0	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.3	0	O	EA-2		
viba_221	MAL/1/98		87.9	0	O	EA-2		
viba_263	TAN/2/2004	bovine	86.8	0	O	EA-2		
viba_576	IND/R2/75		84.7	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.4	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.0	0	O	ME-SA	Ind-2001	e
viba_491	TUR/257/2008		83.8	0	O	ME-SA	PanAsia-2	TER-08
viba_854	ETH/1/2007	cattle	83.7	0	O	EA-3		

Virus sample name:	KRD-049-P/UGA/2016
Sender reference:	O/KRD-049-P
Location of origin:	Kiryandongo, Western Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43559, genome 43560, sequence viba_43561, sequencing info 43562	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.3	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.3	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.9	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.9	0	O	EA-2		
viba_221	MAL/1/98		88.6	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.5	0	O	EA-2		
viba_576	IND/R2/75		85.3	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.9	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.7	0	O	ME-SA	Ind-2001	e
viba_705	KUW/3/97	bovine	84.3	0	O	ME-SA	Ind-2001	a
viba_491	TUR/257/2008		84.3	0	O	ME-SA	PanAsia-2	TER-08

Virus sample name:	KRD-194-P/UGA/2016
Sender reference:	O/KRD-194-P
Location of origin:	Kiryandongo, Western Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43567, genome 43568, sequence viba_43569, sequencing info 43570	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	100.0	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.2	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.7	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.4	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.4	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.8	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.8	0	O	EA-2		
viba_221	MAL/1/98		88.4	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.3	0	O	EA-2		
viba_576	IND/R2/75		85.2	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_523	K83/79		84.2	0	O	EA-1		
viba_705	KUW/3/97	bovine	84.1	0	O	ME-SA	Ind-2001	a

Virus sample name:	KRD-070-P/UGA/2016
Sender reference:	O/KRD-070-P
Location of origin:	Kiryandongo, Western Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43583, genome 43584, sequence viba_43585, sequencing info 43586	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43569	KRD-194-P/UGA/2016	cattle	100.0	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.2	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.7	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.4	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.4	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.8	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.8	0	O	EA-2		
viba_221	MAL/1/98		88.4	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.3	0	O	EA-2		
viba_576	IND/R2/75		85.2	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_523	K83/79		84.2	0	O	EA-1		
viba_705	KUW/3/97	bovine	84.1	0	O	ME-SA	Ind-2001	a

Virus sample name:	MOY2-057-P/UGA/2016
Sender reference:	O/MOY2-057-P
Location of origin:	Moyo, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43615, genome 43616, sequence viba_43617, sequencing info 43618	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.3	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.3	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.8	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.8	0	O	EA-2		
viba_221	MAL/1/98		88.4	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.3	0	O	EA-2		
viba_576	IND/R2/75		85.2	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e
viba_523	K83/79		84.2	0	O	EA-1		
viba_705	KUW/3/97	bovine	84.1	0	O	ME-SA	Ind-2001	a

Virus sample name:	MOY2-099-P/UGA/2016
Sender reference:	O/MOY2-099-P
Location of origin:	Moyo, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43639, genome 43640, sequence viba_43641, sequencing info 43642	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.8	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	99.1	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.6	0	O	EA-2		
viba_38244	KYA-048-P UG	cattle	98.4	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.9	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.9	0	O	EA-2		
viba_221	MAL/1/98		88.6	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.5	0	O	EA-2		
viba_576	IND/R2/75		85.3	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	84.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	84.9	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.7	0	O	ME-SA	Ind-2001	e
viba_705	KUW/3/97	bovine	84.3	0	O	ME-SA	Ind-2001	a
viba_491	TUR/257/2008		84.3	0	O	ME-SA	PanAsia-2	TER-08

Virus sample name:	MOY2-182-P/UGA/2016
Sender reference:	O/MOY2-182-P
Location of origin:	Moyo, Northern Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43647, genome 43648, sequence viba_43649, sequencing info 43650	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43585	KRD-070-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	99.7	0	O	EA-2		
viba_43417	APA-020-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	99.5	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_43661	LUW-037-P/UGA/2016	cattle	98.4	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	98.1	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	98.1	0	O	EA-2		

Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_85	UGA/3/2002		91.8	0	O	EA-2		
viba_74	KEN/5/2002	bovine	90.8	0	O	EA-2		
viba_221	MAL/1/98		88.4	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.3	0	O	EA-2		
viba_576	IND/R2/75		85.0	0	O	ME-SA		
viba_354	PAK/16/2010	cattle	84.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_30238	MUR/19/2016	cattle	84.4	0	O	ME-SA	Ind-2001	e
viba_766	IRN/31/2009	cattle	84.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		84.1	0	O	ME-SA	PanAsia-2	TER-08
viba_705	KUW/3/97	bovine	84.0	0	O	ME-SA	Ind-2001	a

Virus sample name:	LUW-037-P/UGA/2016
Sender reference:	O/LUW-037-P
Location of origin:	Luwero, Central Region
Country of origin:	Uganda
Date of collection:	2016
Host species:	cattle
Serotype:	O
Topotype:	EA-2
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	18/01/2020
Last updated:	18/01/2020
VIBASys IDs: sample 43659, genome 43660, sequence viba_43661, sequencing info 43662	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_43417	APA-020-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_43641	MOY2-099-P/UGA/2016	cattle	98.9	0	O	EA-2		
viba_43585	KRD-070-P/UGA/2016	cattle	98.7	0	O	EA-2		
viba_43569	KRD-194-P/UGA/2016	cattle	98.7	0	O	EA-2		
viba_43617	MOY2-057-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_43561	KRD-049-P/UGA/2016	cattle	98.6	0	O	EA-2		
viba_43649	MOY2-182-P/UGA/2016	cattle	98.4	0	O	EA-2		
viba_43493	APA-254-P/UGA/2016	cattle	97.9	0	O	EA-2		
viba_38260	KYA-129-P UG	cattle	97.5	0	O	EA-2		
viba_43429	APA-067-P/UGA/2016	cattle	97.5	0	O	EA-2		

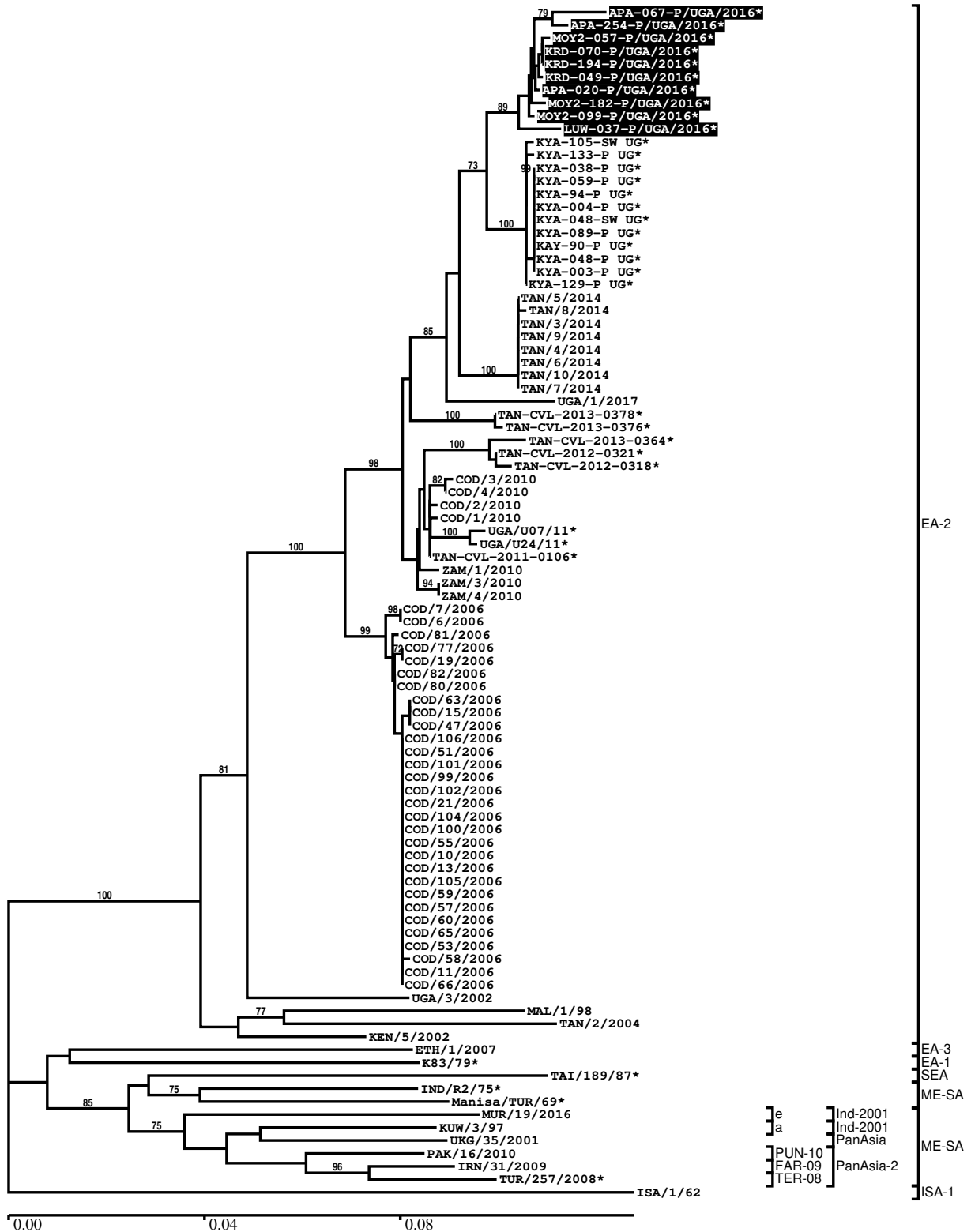
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_74	KEN/5/2002	bovine	91.6	0	O	EA-2		
viba_85	UGA/3/2002		91.5	0	O	EA-2		
viba_221	MAL/1/98		88.9	0	O	EA-2		
viba_263	TAN/2/2004	bovine	87.8	0	O	EA-2		
viba_576	IND/R2/75		85.9	0	O	ME-SA		
viba_359	Manisa/TUR/69		85.1	0	O	ME-SA		
viba_523	K83/79		85.0	0	O	EA-1		
viba_705	KUW/3/97	bovine	84.7	0	O	ME-SA	Ind-2001	a
viba_285	UKG/35/2001	porcine	84.6	0	O	ME-SA	PanAsia	
viba_30238	MUR/19/2016	cattle	84.5	0	O	ME-SA	Ind-2001	e

Report on FMDV O in Uganda in 2016

Batch: WRLMEG/2020/00003A



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor: vp1_O
 Query sequence set: WRLMEG/2020/00003A-Uganda-O (10 sequences)
 Sequence database set: allseqs_O (4633 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: 14
 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
APA-067-P/UGA/2016*	MH367320	cattle	PIADC	Uganda	EA-2
APA-254-P/UGA/2016*	MH367336	cattle	PIADC	Uganda	EA-2
MOY2-057-P/UGA/2016*	MH367367	cattle	PIADC	Uganda	EA-2
KRD-070-P/UGA/2016*	MH367359	cattle	PIADC	Uganda	EA-2
KRD-194-P/UGA/2016*	MH367355	cattle	PIADC	Uganda	EA-2
KRD-049-P/UGA/2016*	MH367353	cattle	PIADC	Uganda	EA-2
APA-020-P/UGA/2016*	MH367317	cattle	PIADC	Uganda	EA-2
MOY2-182-P/UGA/2016*	MH367375	cattle	PIADC	Uganda	EA-2
MOY2-099-P/UGA/2016*	MH367373	cattle	PIADC	Uganda	EA-2
LUW-037-P/UGA/2016*	MH367378	cattle	PIADC	Uganda	EA-2
KYA-105-SW UG*	KY558333	cattle	PIADC	Uganda	EA-2
KYA-133-P UG*	KY558331	cattle	PIADC	Uganda	EA-2
KYA-038-P UG*	KY558325	cattle	PIADC	Uganda	EA-2
KYA-059-P UG*	KY558327	cattle	PIADC	Uganda	EA-2
KYA-94-P UG*	KY558329	cattle	PIADC	Uganda	EA-2
KYA-004-P UG*	KY558324	cattle	PIADC	Uganda	EA-2
KYA-048-SW UG*	KY558332	cattle	PIADC	Uganda	EA-2
KYA-089-P UG*	KY558328	cattle	PIADC	Uganda	EA-2
KAY-90-P UG*	KY548474	cattle	PIADC	Uganda	EA-2
KYA-048-P UG*	KY558326	cattle	PIADC	Uganda	EA-2
KYA-003-P UG*	KY558323	cattle	PIADC	Uganda	EA-2
KYA-129-P UG*	KY558330	cattle	PIADC	Uganda	EA-2
TAN/5/2014	n/a	bovine	WRLFMD	Tanzania	EA-2
TAN/8/2014	MF592669	bovine	WRLFMD	Tanzania	EA-2
TAN/3/2014	MF592665	bovine	WRLFMD	Tanzania	EA-2
TAN/9/2014	MF592670	bovine	WRLFMD	Tanzania	EA-2
TAN/4/2014	MF592666	bovine	WRLFMD	Tanzania	EA-2
TAN/6/2014	MF592667	bovine	WRLFMD	Tanzania	EA-2
TAN/10/2014	MF592671	bovine	WRLFMD	Tanzania	EA-2
TAN/7/2014	MF592668	bovine	WRLFMD	Tanzania	EA-2
UGA/1/2017	n/a	cattle	WRLFMD	Uganda	EA-2
TAN-CVL-2013-0378*	n/a	cattle	CVL, Tanzania	Tanzania	EA-2
TAN-CVL-2013-0376*	n/a	cattle	CVL, Tanzania	Tanzania	EA-2
TAN-CVL-2013-0364*	n/a	cattle	CVL, Tanzania	Tanzania	EA-2
TAN-CVL-2012-0321*	n/a	bovine	CVL	Tanzania	EA-2
TAN-CVL-2012-0318*	n/a	bovine	CVL	Tanzania	EA-2

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label	accession	host(s)	lab	country	taxonomic information
COD/3/2010	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/4/2010	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/2/2010	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/1/2010	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
UGA/U07/11*	KF478939	cattle	Makerere University	Uganda	EA-2
UGA/U24/11*	KF478941	cattle	Makerere University	Uganda	EA-2
TAN-CVL-2011-0106*	n/a	cattle	CVL, Tanzania	Tanzania	EA-2
ZAM/1/2010	n/a	cattle	WRLFMD	Zambia	EA-2
ZAM/3/2010	n/a	cattle	WRLFMD	Zambia	EA-2
ZAM/4/2010	n/a	cattle	WRLFMD	Zambia	EA-2
COD/7/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/6/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/81/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/77/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/19/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/82/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/80/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/63/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/15/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/47/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/106/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/51/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/101/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/99/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/102/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/21/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2

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label	accession	host(s)	lab	country	taxonomic information
COD/104/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/100/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/55/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/10/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/13/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/105/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/59/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/57/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/60/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/65/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/53/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/58/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/11/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
COD/66/2006	n/a	cattle	WRLFMD	Democratic Republic of the Congo	EA-2
UGA/3/2002	DQ165077	n/a	WRLFMD	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
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
K83/79*	AJ303511	n/a	WRLFMD	Kenya	EA-1
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
IND/R2/75*	AF204276	n/a	PD-FMD	India	ME-SA
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-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
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available