

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

## Genotyping Report

FMDV serotype: A  
Country: Ethiopia  
Year: 2018  
Batch: WRLFMD/2019/00001  
No. of sequences: 26  
Report date: 6th March 2019  
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](mailto:reporting@pirbright.ac.uk)

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Virus sample name:	ETH/35/2018
Sender reference:	ETH/16/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40333, genome 40334, sequence viba_40335, sequencing info 40336	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40339	ETH/36/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40351	ETH/39/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40347	ETH/38/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40343	ETH/37/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40355	ETH/40/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	98.6	0	A	AFRICA	G-IV	

#### 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_535	NGR/2/73	bovine	84.5	0	A	AFRICA	G-V	
viba_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.1	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_589	Bangkok/TAI/60		81.3	0	A	ASIA	A15	
viba_98	Alem/ARG/81		81.2	0	A	EURO-SA	A81	

Virus sample name:	ETH/36/2018
Sender reference:	ETH/16/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40337, genome 40338, sequence viba_40339, sequencing info 40340	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40335	ETH/35/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40351	ETH/39/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40347	ETH/38/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40343	ETH/37/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40355	ETH/40/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	98.6	0	A	AFRICA	G-IV	

#### 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_535	NGR/2/73	bovine	84.5	0	A	AFRICA	G-V	
viba_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.1	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_589	Bangkok/TAI/60		81.3	0	A	ASIA	A15	
viba_98	Alem/ARG/81		81.2	0	A	EURO-SA	A81	

Virus sample name:	ETH/37/2018
Sender reference:	ETH/17/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 17/02/2019; BTy2
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40341, genome 40342, sequence viba_40343, sequencing info 40344	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40339	ETH/36/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40335	ETH/35/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40351	ETH/39/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40347	ETH/38/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40355	ETH/40/2018	cattle	98.9	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.4	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.4	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.4	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	98.4	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	98.4	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.4	0	A	AFRICA	G-IV	
viba_535	NGR/2/73	bovine	84.3	0	A	AFRICA	G-V	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.1	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		81.9	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.9	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_589	Bangkok/TAI/60		81.3	0	A	ASIA	A15	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/38/2018
Sender reference:	ETH/18/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40345, genome 40346, sequence viba_40347, sequencing info 40348	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40339	ETH/36/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40335	ETH/35/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40351	ETH/39/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40343	ETH/37/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40355	ETH/40/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	98.6	0	A	AFRICA	G-IV	

#### 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_535	NGR/2/73	bovine	84.5	0	A	AFRICA	G-V	
viba_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.1	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_589	Bangkok/TAI/60		81.3	0	A	ASIA	A15	
viba_98	Alem/ARG/81		81.2	0	A	EURO-SA	A81	

Virus sample name:	ETH/39/2018
Sender reference:	ETH/19/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40349, genome 40350, sequence viba_40351, sequencing info 40352	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40339	ETH/36/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40335	ETH/35/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40347	ETH/38/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40343	ETH/37/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40355	ETH/40/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	98.6	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	98.6	0	A	AFRICA	G-IV	

#### 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_535	NGR/2/73	bovine	84.5	0	A	AFRICA	G-V	
viba_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.1	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_589	Bangkok/TAI/60		81.3	0	A	ASIA	A15	
viba_98	Alem/ARG/81		81.2	0	A	EURO-SA	A81	

Virus sample name:	ETH/40/2018
Sender reference:	ETH/20/2018
Location of origin:	Jida Woreda, North Showa Zone, Oromia Region
Country of origin:	Ethiopia
Date of collection:	22/10/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40353, genome 40354, sequence viba_40355, sequencing info 40356	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40339	ETH/36/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40335	ETH/35/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40351	ETH/39/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40347	ETH/38/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40407	ETH/54/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40411	ETH/55/2018	cattle	99.1	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	98.9	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	98.9	0	A	AFRICA	G-IV	
viba_40343	ETH/37/2018	cattle	98.9	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	98.9	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.4	0	A	AFRICA	G-IV	
viba_535	NGR/2/73	bovine	83.8	0	A	AFRICA	G-V	
viba_347	KEN/42/66		83.8	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.1	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	82.8	0	A	AFRICA	G-VI	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_98	Alem/ARG/81		81.2	0	A	EURO-SA	A81	
viba_173	UGA/13/66	bovine	80.7	0	A	AFRICA	G-VII	
viba_699	UKG/119/32		80.6	0	A	EURO-SA	A12	
viba_435	Allier/FRA/60		80.6	0	A	EURO-SA	A5	

Virus sample name:	ETH/42/2018
Sender reference:	ETH/21/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40357, genome 40358, sequence viba_40359, sequencing info 40360	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	



Virus sample name:	ETH/43/2018
Sender reference:	ETH/22/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40361, genome 40362, sequence viba_40363, sequencing info 40364	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/44/2018
Sender reference:	ETH/23/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40365, genome 40366, sequence viba_40367, sequencing info 40368	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/45/2018
Sender reference:	ETH/23/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40369, genome 40370, sequence viba_40371, sequencing info 40372	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/46/2018
Sender reference:	ETH/24/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40373, genome 40374, sequence viba_40375, sequencing info 40376	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/47/2018
Sender reference:	ETH/25/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40377, genome 40378, sequence viba_40379, sequencing info 40380	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/48/2018
Sender reference:	ETH/26/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40381, genome 40382, sequence viba_40383, sequencing info 40384	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40387	ETH/49/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.8	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_535	NGR/2/73	bovine	83.0	0	A	AFRICA	G-V	
viba_699	UKG/119/32		82.4	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.0	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.5	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		81.3	0	A	EURO-SA	A81	
viba_435	Allier/FRA/60		81.1	0	A	EURO-SA	A5	

Virus sample name:	ETH/49/2018
Sender reference:	ETH/26/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40385, genome 40386, sequence viba_40387, sequencing info 40388	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40383	ETH/48/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.8	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_535	NGR/2/73	bovine	83.0	0	A	AFRICA	G-V	
viba_699	UKG/119/32		82.4	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	82.0	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.5	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		81.3	0	A	EURO-SA	A81	
viba_435	Allier/FRA/60		81.1	0	A	EURO-SA	A5	

Virus sample name:	ETH/50/2018
Sender reference:	ETH/27/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40389, genome 40390, sequence viba_40391, sequencing info 40392	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	



Virus sample name:	ETH/51/2018
Sender reference:	ETH/28/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40393, genome 40394, sequence viba_40395, sequencing info 40396	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/52/2018
Sender reference:	ETH/29/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40397, genome 40398, sequence viba_40399, sequencing info 40400	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40403	ETH/53/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/53/2018
Sender reference:	ETH/29/2018
Location of origin:	Keyet Woreda, North Showa Zone, Amhara Region
Country of origin:	Ethiopia
Date of collection:	02/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40401, genome 40402, sequence viba_40403, sequencing info 40404	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40367	ETH/44/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40395	ETH/51/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40383	ETH/48/2018	cattle	99.8	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.1	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_535	NGR/2/73	bovine	83.2	0	A	AFRICA	G-V	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.6	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.8	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.3	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		81.2	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	

Virus sample name:	ETH/54/2018
Sender reference:	ETH/31/2018
Location of origin:	Tirobrodorbakebele, Mulo Woreda, Oromia Zone Surrounding Finfinne, Oromia Region
Country of origin:	Ethiopia
Date of collection:	08/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	20/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40405, genome 40406, sequence viba_40407, sequencing info 40408	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40411	ETH/55/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.5	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.7	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.3	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.0	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		80.9	0	A	EURO-SA	A81	
viba_682	IRN/2/87	bovine	80.8	0	A	ASIA	Iran-87	

Virus sample name:	ETH/55/2018
Sender reference:	ETH/32/2018
Location of origin:	Tirobrodorbakebele, Mulo Woreda, Oromia Zone Surrounding Finfinne, Oromia Region
Country of origin:	Ethiopia
Date of collection:	08/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40409, genome 40410, sequence viba_40411, sequencing info 40412	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40407	ETH/54/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.5	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.7	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.7	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.6	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.3	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.0	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		80.9	0	A	EURO-SA	A81	
viba_682	IRN/2/87	bovine	80.8	0	A	ASIA	Iran-87	

Virus sample name:	ETH/60/2018
Sender reference:	ETH/36/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	08/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019

VIBASys IDs: sample 40413, genome 40414, sequence viba\_40415, sequencing info 40416

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40419	ETH/61/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.7	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.9	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.4	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.3	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.2	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	
viba_435	Allier/FRA/60		80.9	0	A	EURO-SA	A5	

Virus sample name:	ETH/61/2018
Sender reference:	ETH/37/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	08/11/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019

VIBASys IDs: sample 40417, genome 40418, sequence viba\_40419, sequencing info 40420

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40415	ETH/60/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40391	ETH/50/2018	cattle	99.7	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.9	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.4	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.3	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.2	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		81.1	0	A	EURO-SA	A81	
viba_435	Allier/FRA/60		80.9	0	A	EURO-SA	A5	

Virus sample name:	ETH/67/2018
Sender reference:	ETH/40/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	04/12/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40421, genome 40422, sequence viba_40423, sequencing info 40424	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40427	ETH/68/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40431	ETH/69/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.5	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.4	0	A	AFRICA	G-IV	
viba_535	NGR/2/73	bovine	84.0	0	A	AFRICA	G-V	
viba_347	KEN/42/66		83.8	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.7	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.0	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		80.9	0	A	EURO-SA	A81	
viba_682	IRN/2/87	bovine	80.8	0	A	ASIA	Iran-87	



Virus sample name:	ETH/68/2018
Sender reference:	ETH/41/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	04/12/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	15/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019
VIBASys IDs: sample 40425, genome 40426, sequence viba_40427, sequencing info 40428	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40423	ETH/67/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40435	ETH/70/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40431	ETH/69/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.5	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.5	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.4	0	A	AFRICA	G-IV	
viba_535	NGR/2/73	bovine	84.0	0	A	AFRICA	G-V	
viba_347	KEN/42/66		83.8	0	A	AFRICA	G-I	
viba_785	KEN/3/64		83.3	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.0	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.1	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.7	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.0	0	A	AFRICA	G-VII	
viba_98	Alem/ARG/81		80.9	0	A	EURO-SA	A81	
viba_682	IRN/2/87	bovine	80.8	0	A	ASIA	Iran-87	

Virus sample name:	ETH/69/2018
Sender reference:	ETH/42/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	04/12/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	21/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019

VIBASys IDs: sample 40429, genome 40430, sequence viba\_40431, sequencing info 40432

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40435	ETH/70/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40427	ETH/68/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40423	ETH/67/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.7	0	A	AFRICA	G-IV	

#### 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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.9	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.4	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.3	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.2	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		80.9	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		80.8	0	A	EURO-SA	A81	

Virus sample name:	ETH/70/2018
Sender reference:	ETH/42/2018
Location of origin:	Sendafa Kebele 01, Bereh-Aleltu Woreda, Oromia Zone Surrounding Finfinne, Oromia Reg
Country of origin:	Ethiopia
Date of collection:	04/12/2018
Host species:	cattle
Serotype:	A
Topotype:	AFRICA
Lineage:	G-IV
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 22/02/2019; BTy2
Harvest date of material:	23/02/2019
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	28/02/2019
Created:	06/03/2019
Last updated:	06/03/2019

VIBASys IDs: sample 40433, genome 40434, sequence viba\_40435, sequencing info 40436

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40431	ETH/69/2018	cattle	100.0	0	A	AFRICA	G-IV	
viba_40427	ETH/68/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40423	ETH/67/2018	cattle	99.8	0	A	AFRICA	G-IV	
viba_40367	ETH/44/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40375	ETH/46/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40363	ETH/43/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40379	ETH/47/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40399	ETH/52/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40359	ETH/42/2018	cattle	99.7	0	A	AFRICA	G-IV	
viba_40371	ETH/45/2018	cattle	99.7	0	A	AFRICA	G-IV	

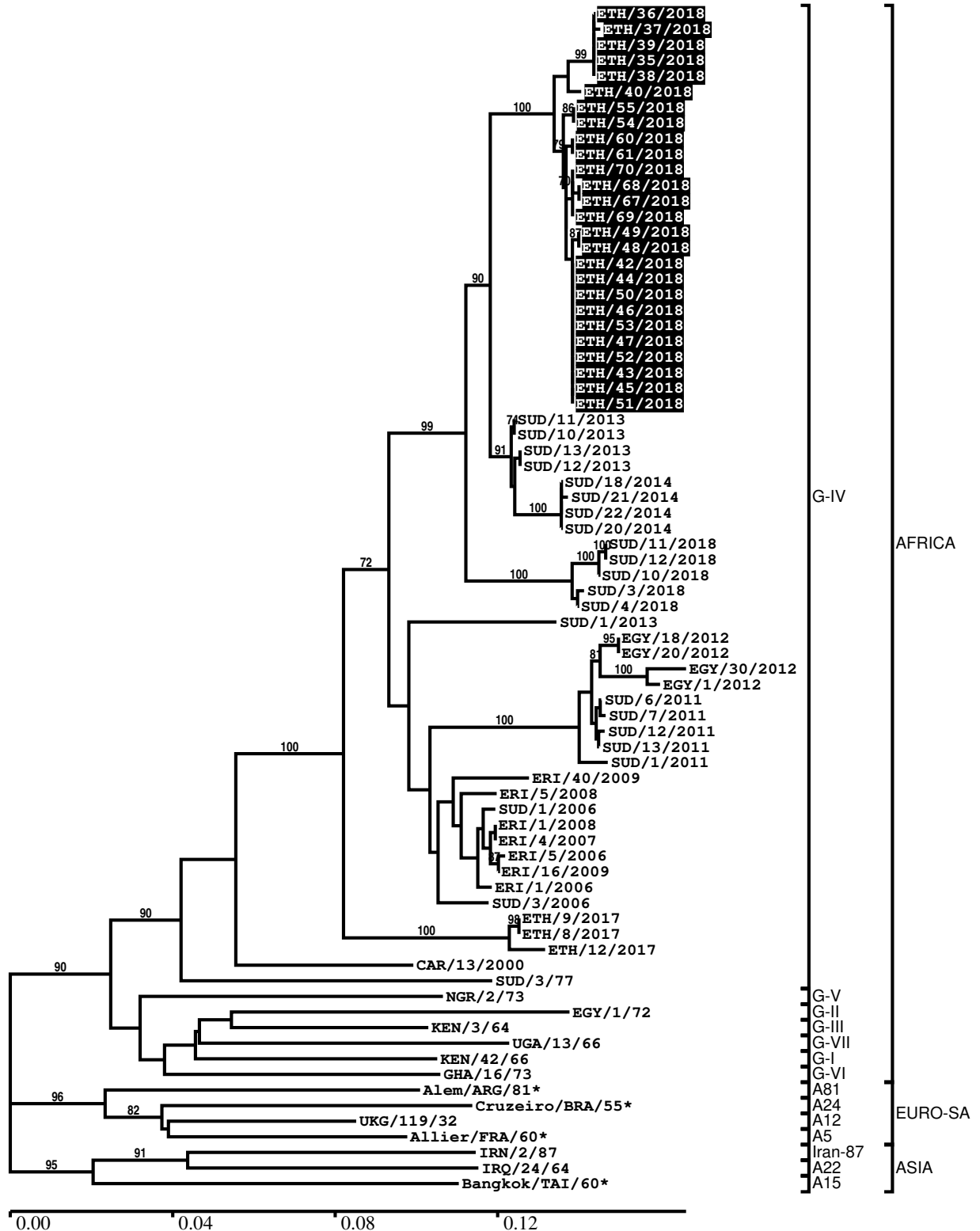
#### Most Closely Related Prototype Sequences

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_178	SUD/3/77		84.5	0	A	AFRICA	G-IV	
viba_347	KEN/42/66		84.0	0	A	AFRICA	G-I	
viba_535	NGR/2/73	bovine	83.9	0	A	AFRICA	G-V	
viba_785	KEN/3/64		83.4	0	A	AFRICA	G-III	
viba_609	GHA/16/73	bovine	83.1	0	A	AFRICA	G-VI	
viba_699	UKG/119/32		82.3	0	A	EURO-SA	A12	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_173	UGA/13/66	bovine	81.2	0	A	AFRICA	G-VII	
viba_435	Allier/FRA/60		80.9	0	A	EURO-SA	A5	
viba_98	Alem/ARG/81		80.8	0	A	EURO-SA	A81	

Report on FMDV A in Ethiopia in 2018

Batch: WRLFMD/2019/00001



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor: vp1\_A  
 Query sequence set: WRLFMD/2019/00001-Ethiopia-A (26 sequences)  
 Sequence database set: allseqs\_A (1983 sequences)  
 Prototype sequence set: !prototypes\_A (40 sequences)  
 Number of related sequences reported: 10  
 Minimal VP1 subsequence match length: 600  
 Sequence alignment method: muscle (default parameters)  
 Sequence alignment length: 633  
 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: 12  
 VIBASys version: reflabs-1.1.2

## Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/A

label	accession	host(s)	lab	country	taxonomic information
ETH/36/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/37/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/39/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/35/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/38/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/40/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/55/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/54/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/60/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/61/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/70/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/68/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/67/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/69/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/49/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/48/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/42/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/44/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/50/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/46/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/53/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/47/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/52/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/43/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/45/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/51/2018	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
SUD/11/2013	MK422582	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/10/2013	MK422581	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/13/2013	MK422584	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/12/2013	MK422583	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/18/2014	MK422585	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/21/2014	MK422587	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/22/2014	MK422588	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/20/2014	MK422586	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/11/2018	MK422596	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/12/2018	MK422597	cattle	WRLFMD	Sudan	AFRICA/G-IV

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
SUD/10/2018	MK422595	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/3/2018	MK422589	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/4/2018	MK422590	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/1/2013	MK422580	cattle	WRLFMD	Sudan	AFRICA/G-IV
EGY/18/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/20/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/30/2012	n/a	cattle	WRLFMD	Egypt	AFRICA/G-IV
EGY/1/2012	MK422572	n/a	WRLFMD	Egypt	AFRICA/G-IV
SUD/6/2011	MK422576	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/7/2011	MK422577	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/12/2011	MK422579	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/13/2011	MK422578	cattle	WRLFMD	Sudan	AFRICA/G-IV
SUD/1/2011	MK422575	cattle	WRLFMD	Sudan	AFRICA/G-IV
ERI/40/2009	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/5/2008	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
SUD/1/2006	GU566069	cattle	WRLFMD	Sudan	AFRICA/G-IV
ERI/1/2008	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/4/2007	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/5/2006	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/16/2009	n/a	cattle	WRLFMD	Eritrea	AFRICA/G-IV
ERI/1/2006	KX258046	cattle	WRLFMD	Eritrea	AFRICA/G-IV
SUD/3/2006	GU566070	cattle	WRLFMD	Sudan	AFRICA/G-IV
ETH/9/2017	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/8/2017	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
ETH/12/2017	n/a	cattle	WRLFMD	Ethiopia	AFRICA/G-IV
CAR/13/2000	KX258131	n/a	WRLFMD	Cameroon	AFRICA/G-IV
SUD/3/77	GU566064	n/a	WRLFMD	Sudan	AFRICA/G-IV
NGR/2/73	KF561704	bovine	WRLFMD	Niger	AFRICA/G-V
EGY/1/72	EF208756	bovine	WRLFMD	Egypt	AFRICA/G-II
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III
UGA/13/66	KF561705	bovine	WRLFMD	Uganda	AFRICA/G-VII
KEN/42/66	KF561699	n/a	WRLFMD	Kenya	AFRICA/G-I
GHA/16/73	KF561698	bovine	WRLFMD	Ghana	AFRICA/G-VI
Alem/ARG/81*	AJ306219	n/a	INTA-Argentina	Argentina	EURO-SA/A81
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
UKG/119/32	M10975	n/a	PIADC	United Kingdom	EURO-SA/A12
Allier/FRA/60*	AY593780	n/a	PIADC	France	EURO-SA/A5
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
Bangkok/TAI/60*	AY593755	n/a	PIADC	Thailand	ASIA/A15

\*, not a WRLFMD Reference Number

n/a, not available