

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

## Genotyping Report

FMDV serotype: O  
Country: Nigeria  
Year: 2016  
Batch: WRLFMD/2016/00034  
No. of sequences: 17  
Report date: 10th January 2017  
Report generated by: Kasia Bankowska  
Report checked by: Nick Knowles



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Virus sample name:	NIG/1/2016
Sender reference:	PL/KA/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	27/06/2016
Host species:	cattle
Serotype:	O
Topotype:	WA
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	26/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30955, genome 30956, sequence viba_30957, sequencing info 30958	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_18530	NIG/3/2011	bovine	95.3	0	O	WA		
viba_6711	TOG/1/2004	cattle	94.2	0	O	WA		
viba_7726	TOG/4/2005	cattle	93.7	0	O	WA		
viba_7722	TOG/3/2005	cattle	93.7	0	O	WA		
viba_7718	TOG/1/2005	cattle	93.7	0	O	WA		
viba_19859	Lam/GHA/2012	cattle	93.4	0	O	WA		
viba_302	CIV/8/99	bovine	91.6	0	O	WA		
viba_3810	MOR/2/99		91.3	0	O	WA		
viba_2471	GNA/4/99		91.2	0	O	WA		
viba_7475	MAI/2/2005	cattle	91.2	0	O	WA		

### 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_302	CIV/8/99	bovine	91.6	0	O	WA		
viba_104	GHA/5/93	bovine	88.5	0	O	WA		
viba_397	UAE/4/2008	gazelle	84.4	0	O	ME-SA	Ind-2001	c
viba_705	KUW/3/97	bovine	84.4	0	O	ME-SA	Ind-2001	a
viba_854	ETH/1/2007	cattle	83.8	0	O	EA-3		
viba_617	IND/53/79	bovine	83.8	0	O	ME-SA		
viba_576	IND/R2/75		83.8	0	O	ME-SA		
viba_116	SUD/2/86	bovine	83.8	0	O	EA-3		
viba_523	K83/79		83.6	0	O	EA-1		
viba_541	OMN/7/2001	bovine	83.5	0	O	ME-SA	Ind-2001	b

Virus sample name:	NIG/4/2016
Sender reference:	BN/BU/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	19/08/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	28/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30959, genome 30960, sequence viba_30961, sequencing info 30962	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30965	NIG/5/2016	cattle	100.0	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	100.0	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.8	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.7	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.7	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.7	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.7	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.5	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.5	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.1	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.6	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.9	0	O	WA		
viba_62	ETH/2/2006	bovine	83.9	0	O	EA-3		
viba_523	K83/79		83.9	0	O	EA-1		
viba_85	UGA/3/2002		83.9	0	O	EA-2		

Virus sample name:	NIG/5/2016
Sender reference:	BN/BU/02/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	19/08/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	27/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	10/01/2017
Last updated:	10/01/2017
VIBASys IDs: sample 30963, genome 30964, sequence viba_30965, sequencing info 30966	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	100.0	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	100.0	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.8	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.7	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.7	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.7	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.7	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.5	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.5	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.1	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.6	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.9	0	O	WA		
viba_62	ETH/2/2006	bovine	83.9	0	O	EA-3		
viba_523	K83/79		83.9	0	O	EA-1		
viba_85	UGA/3/2002		83.9	0	O	EA-2		

Virus sample name:	NIG/6/2016
Sender reference:	BN/BU/03/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	19/08/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	28/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	10/01/2017
Last updated:	10/01/2017
VIBASys IDs: sample 30967, genome 30968, sequence viba_30969, sequencing info 30970	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	99.7	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.7	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.7	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.7	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.5	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.4	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.4	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.4	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.2	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	88.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	85.8	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.3	0	O	EA-3		
viba_50	UGA/17/98		84.6	0	O	EA-4		
viba_285	UKG/35/2001	porcine	84.0	0	O	ME-SA	PanAsia	
viba_62	ETH/2/2006	bovine	83.9	0	O	EA-3		
viba_576	IND/R2/75		83.9	0	O	ME-SA		
viba_104	GHA/5/93	bovine	83.6	0	O	WA		
viba_523	K83/79		83.6	0	O	EA-1		
viba_85	UGA/3/2002		83.6	0	O	EA-2		

Virus sample name:	NIG/7/2016
Sender reference:	PL/PKN/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	03/09/2016
Host species:	sheep
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	29/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	14/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30971, genome 30972, sequence viba_30973, sequencing info 30974	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30985	NIG/11/2016	cattle	99.8	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.8	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.8	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.4	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.1	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	88.6	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.0	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.2	0	O	EA-3		
viba_50	UGA/17/98		84.5	0	O	EA-4		
viba_576	IND/R2/75		83.9	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	83.8	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		83.5	0	O	ME-SA		
viba_104	GHA/5/93	bovine	83.4	0	O	WA		
viba_766	IRN/31/2009	cattle	83.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	83.4	0	O	EA-3		

Virus sample name:	NIG/9/2016
Sender reference:	PL/PKN/03/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	03/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 29/10/2016 & BTy2
Harvest date of material:	23/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30975, genome 30976, sequence viba_30977, sequencing info 30978	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30985	NIG/11/2016	cattle	100.0	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	100.0	0	O	EA-3		
viba_30973	NIG/7/2016	sheep	99.8	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.7	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.7	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.7	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.7	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.5	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.4	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	88.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.3	0	O	EA-3		
viba_50	UGA/17/98		84.6	0	O	EA-4		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.0	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.6	0	O	WA		
viba_523	K83/79		83.6	0	O	EA-1		
viba_359	Manisa/TUR/69		83.6	0	O	ME-SA		
viba_85	UGA/3/2002		83.6	0	O	EA-2		

Virus sample name:	NIG/10/2016
Sender reference:	PL/PKN/04/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	03/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	28/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	10/01/2017
Last updated:	10/01/2017

VIBASys IDs: sample 30979, genome 30980, sequence viba\_30981, sequencing info 30982

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30985	NIG/11/2016	cattle	100.0	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	100.0	0	O	EA-3		
viba_30973	NIG/7/2016	sheep	99.8	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.7	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.7	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.7	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.7	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.5	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.4	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	88.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.3	0	O	EA-3		
viba_50	UGA/17/98		84.6	0	O	EA-4		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.0	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.6	0	O	WA		
viba_523	K83/79		83.6	0	O	EA-1		
viba_359	Manisa/TUR/69		83.6	0	O	ME-SA		
viba_85	UGA/3/2002		83.6	0	O	EA-2		



Virus sample name:	NIG/11/2016
Sender reference:	PL/PKN/05/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	03/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	15/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	15/12/2016
Last updated:	15/12/2016
VIBASys IDs: sample 30983, genome 30984, sequence viba_30985, sequencing info 30986	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30977	NIG/9/2016	cattle	100.0	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	100.0	0	O	EA-3		
viba_30973	NIG/7/2016	sheep	99.8	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.7	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.7	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.7	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.7	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.5	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.4	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	88.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.3	0	O	EA-3		
viba_50	UGA/17/98		84.6	0	O	EA-4		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.0	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.6	0	O	WA		
viba_523	K83/79		83.6	0	O	EA-1		
viba_359	Manisa/TUR/69		83.6	0	O	ME-SA		
viba_85	UGA/3/2002		83.6	0	O	EA-2		

Virus sample name:	NIG/12/2016
Sender reference:	PL/JS/GE/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	09/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	15/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30987, genome 30988, sequence viba_30989, sequencing info 30990	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30993	NIG/13/2016	cattle	99.7	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.4	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.2	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.2	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.0	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.0	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.5	0	O	EA-3		
viba_50	UGA/17/98		84.8	0	O	EA-4		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.1	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.8	0	O	WA		
viba_523	K83/79		83.8	0	O	EA-1		
viba_766	IRN/31/2009	cattle	83.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	83.7	0	O	EA-3		

Virus sample name:	NIG/13/2016
Sender reference:	PL/JS/GE/02/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	09/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	15/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30991, genome 30992, sequence viba_30993, sequencing info 30994	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30989	NIG/12/2016	cattle	99.7	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.4	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.2	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.2	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.0	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.0	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.5	0	O	EA-3		
viba_50	UGA/17/98		84.8	0	O	EA-4		
viba_104	GHA/5/93	bovine	84.1	0	O	WA		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_523	K83/79		84.1	0	O	EA-1		
viba_285	UKG/35/2001	porcine	84.1	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		83.8	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	83.7	0	O	ME-SA	PanAsia-2	FAR-09

Virus sample name:	NIG/14/2016
Sender reference:	PL/BLD/A/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30995, genome 30996, sequence viba_30997, sequencing info 30998	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31001	NIG/15/2016	cattle	100.0	0	O	EA-3		
viba_31005	NIG/16/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.7	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.2	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.3	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.3	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.8	0	O	EA-3		
viba_50	UGA/17/98		85.1	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	84.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	84.0	0	O	EA-3		
viba_85	UGA/3/2002		84.0	0	O	EA-2		
viba_221	MAL/1/98		83.9	0	O	EA-2		

Virus sample name:	NIG/15/2016
Sender reference:	PL/BLD/A/02/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	16/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 30999, genome 31000, sequence viba_31001, sequencing info 31002	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30997	NIG/14/2016	cattle	100.0	0	O	EA-3		
viba_31005	NIG/16/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.7	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.2	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.3	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.3	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.8	0	O	EA-3		
viba_50	UGA/17/98		85.1	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	84.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	84.0	0	O	EA-3		
viba_85	UGA/3/2002		84.0	0	O	EA-2		
viba_221	MAL/1/98		83.9	0	O	EA-2		

Virus sample name:	NIG/16/2016
Sender reference:	PL/BLD/A/03/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	15/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	14/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 31003, genome 31004, sequence viba_31005, sequencing info 31006	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31001	NIG/15/2016	cattle	100.0	0	O	EA-3		
viba_30997	NIG/14/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.7	0	O	EA-3		
viba_30961	NIG/4/2016	cattle	99.5	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.5	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.5	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.5	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.2	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.2	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.2	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.3	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.3	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.8	0	O	EA-3		
viba_50	UGA/17/98		85.1	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	84.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_62	ETH/2/2006	bovine	84.0	0	O	EA-3		
viba_85	UGA/3/2002		84.0	0	O	EA-2		
viba_221	MAL/1/98		83.9	0	O	EA-2		

Virus sample name:	NIG/17/2016
Sender reference:	PL/BLD/B/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	18/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	14/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 31007, genome 31008, sequence viba_31009, sequencing info 31010	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	100.0	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	100.0	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.8	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.7	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.7	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.7	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.7	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.5	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.5	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.1	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.6	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.9	0	O	WA		
viba_62	ETH/2/2006	bovine	83.9	0	O	EA-3		
viba_523	K83/79		83.9	0	O	EA-1		
viba_85	UGA/3/2002		83.9	0	O	EA-2		

Virus sample name:	NIG/18/2016
Sender reference:	PL/BLD/B/02/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	18/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	10/01/2017
Last updated:	10/01/2017
VIBASys IDs: sample 31011, genome 31012, sequence viba_31013, sequencing info 31014	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	99.8	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	99.8	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	99.8	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	99.8	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.7	0	O	EA-3		
viba_30997	NIG/14/2016	cattle	99.7	0	O	EA-3		
viba_31005	NIG/16/2016	cattle	99.7	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.5	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.5	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.5	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.0	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.0	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.5	0	O	EA-3		
viba_50	UGA/17/98		84.8	0	O	EA-4		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.1	0	O	ME-SA	PanAsia	
viba_85	UGA/3/2002		84.0	0	O	EA-2		
viba_221	MAL/1/98		83.9	0	O	EA-2		
viba_104	GHA/5/93	bovine	83.8	0	O	WA		
viba_523	K83/79		83.8	0	O	EA-1		



Virus sample name:	NIG/19/2016
Sender reference:	PL/BLD/B/03/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	13/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 31015, genome 31016, sequence viba_31017, sequencing info 31018	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	100.0	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	100.0	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	100.0	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	99.8	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	99.7	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	99.7	0	O	EA-3		
viba_30977	NIG/9/2016	cattle	99.7	0	O	EA-3		
viba_30981	NIG/10/2016	cattle	99.7	0	O	EA-3		
viba_30993	NIG/13/2016	cattle	99.5	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	99.5	0	O	EA-3		

#### 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_116	SUD/2/86	bovine	89.1	0	O	EA-3		
viba_854	ETH/1/2007	cattle	86.1	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.6	0	O	EA-3		
viba_50	UGA/17/98		84.9	0	O	EA-4		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_285	UKG/35/2001	porcine	84.3	0	O	ME-SA	PanAsia	
viba_104	GHA/5/93	bovine	83.9	0	O	WA		
viba_62	ETH/2/2006	bovine	83.9	0	O	EA-3		
viba_523	K83/79		83.9	0	O	EA-1		
viba_85	UGA/3/2002		83.9	0	O	EA-2		

Virus sample name:	NIG/21/2016
Sender reference:	KD/01/16
Location of origin:	-
Country of origin:	Nigeria
Date of collection:	30/09/2016
Host species:	cattle
Serotype:	O
Topotype:	EA-3
Lineage:	
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	19/11/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	28/11/2016
Created:	06/12/2016
Last updated:	14/12/2016
VIBASys IDs: sample 31019, genome 31020, sequence viba_31021, sequencing info 31022	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30961	NIG/4/2016	cattle	98.7	0	O	EA-3		
viba_30965	NIG/5/2016	cattle	98.7	0	O	EA-3		
viba_31017	NIG/19/2016	cattle	98.7	0	O	EA-3		
viba_31009	NIG/17/2016	cattle	98.7	0	O	EA-3		
viba_31001	NIG/15/2016	cattle	98.6	0	O	EA-3		
viba_30997	NIG/14/2016	cattle	98.6	0	O	EA-3		
viba_31013	NIG/18/2016	cattle	98.6	0	O	EA-3		
viba_31005	NIG/16/2016	cattle	98.6	0	O	EA-3		
viba_30985	NIG/11/2016	cattle	98.4	0	O	EA-3		
viba_30969	NIG/6/2016	cattle	98.4	0	O	EA-3		

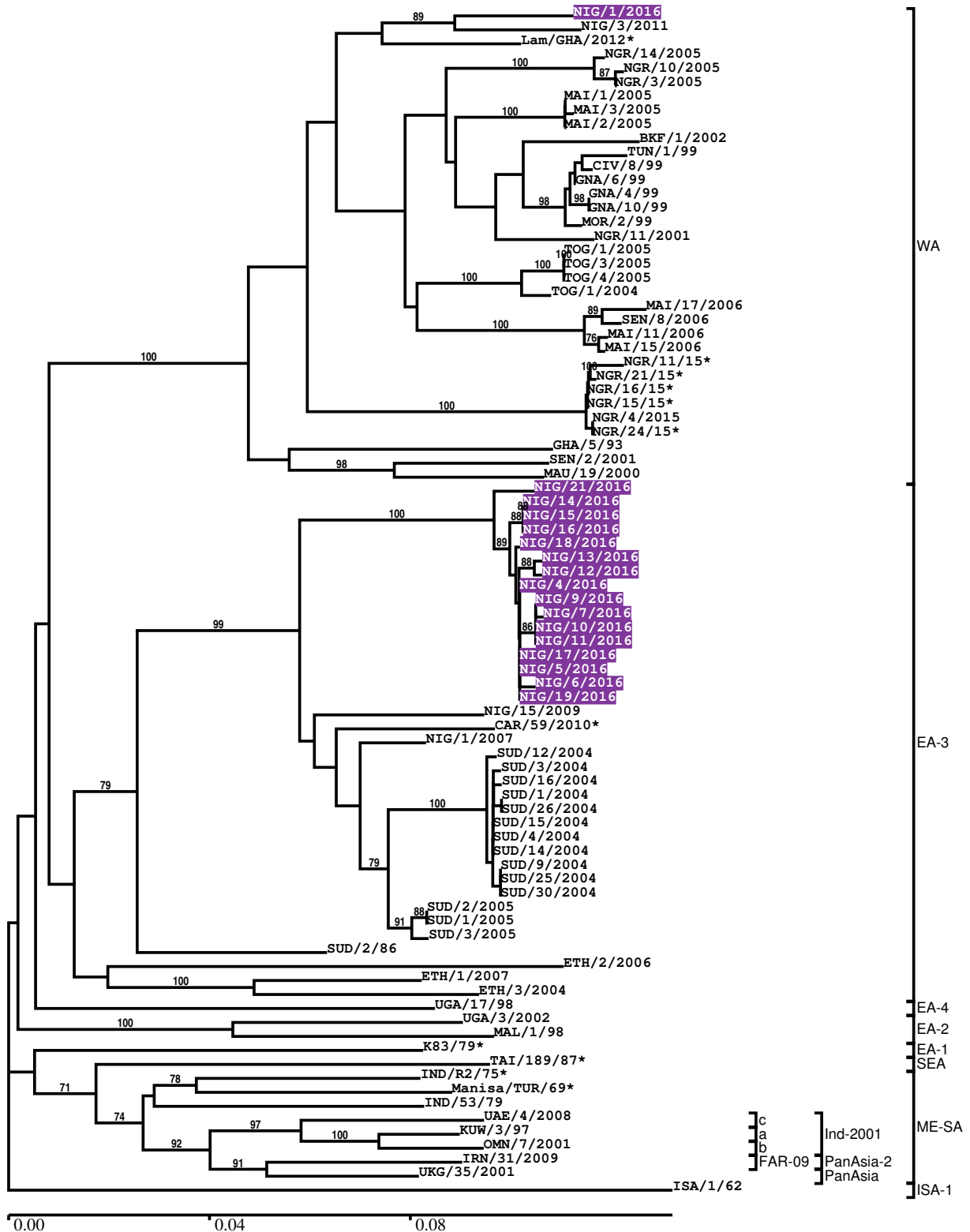
#### Most Closely Related Prototype Sequences

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_116	SUD/2/86	bovine	88.8	0	O	EA-3		
viba_854	ETH/1/2007	cattle	85.8	0	O	EA-3		
viba_408	ETH/3/2004	cattle	85.6	0	O	EA-3		
viba_50	UGA/17/98		84.8	0	O	EA-4		
viba_62	ETH/2/2006	bovine	84.2	0	O	EA-3		
viba_576	IND/R2/75		84.1	0	O	ME-SA		
viba_523	K83/79		84.1	0	O	EA-1		
viba_285	UKG/35/2001	porcine	84.0	0	O	ME-SA	PanAsia	
viba_85	UGA/3/2002		84.0	0	O	EA-2		
viba_221	MAL/1/98		83.9	0	O	EA-2		

Report on FMDV O in Nigeria in 2016

Batch: WRLFMD/2016/00034



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor: vp1\_O  
 Query sequence set: WRLFMD/2016/00034-Nigeria-O (17 sequences)  
 Sequence database set: allseqs\_O (3181 sequences)  
 Prototype sequence set: !prototypes\_O (47 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: 18  
 VIBASys version: master-1.1.0-17-gf69a4d1

## Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
NIG/1/2016	n/a	cattle	WRLFMD	Nigeria	WA
NIG/3/2011	KX258023	bovine	WRLFMD	Nigeria	WA
Lam/GHA/2012*	KF305227	cattle	ANSES	Ghana	WA
NGR/14/2005	KX258019	cattle	WRLFMD	Niger	WA
NGR/10/2005	KX258018	cattle	WRLFMD	Niger	WA
NGR/3/2005	KX258017	cattle	WRLFMD	Niger	WA
MAI/1/2005	KX258007	cattle	n/a	Mali	WA
MAI/3/2005	KX258009	cattle	n/a	Mali	WA
MAI/2/2005	KX258008	cattle	n/a	Mali	WA
BKF/1/2002	KX258000	n/a	WRLFMD	Burkina Faso	WA
TUN/1/99	KX258042	n/a	WRLFMD	Tunisia	WA
CIV/8/99	AJ303485	bovine	WRLFMD	Cote d'Ivoire	WA
GNA/6/99	KX258005	bovine	WRLFMD	Guinea	WA
GNA/4/99	DQ165071	n/a	WRLFMD	Guinea	WA
GNA/10/99	KX258006	bovine	n/a	Guinea	WA
MOR/2/99	KX258015	n/a	WRLFMD	Morocco	WA
NGR/11/2001	KX258016	n/a	WRLFMD	Niger	WA
TOG/1/2005	KX258039	cattle	WRLFMD	Togo	WA
TOG/3/2005	KX258040	cattle	WRLFMD	Togo	WA
TOG/4/2005	KX258041	cattle	WRLFMD	Togo	WA
TOG/1/2004	KX258038	cattle	WRLFMD	Togo	WA
MAI/17/2006	KX258012	n/a	WRLFMD	Mali	WA
SEN/8/2006	KX258032	cattle	WRLFMD	Senegal	WA
MAI/11/2006	KX258010	n/a	WRLFMD	Mali	WA
MAI/15/2006	KX258011	n/a	WRLFMD	Mali	WA
NGR/11/15*	KX424677	cattle	BVI	Niger	WA
NGR/21/15*	KX424681	cattle	BVI	Niger	WA
NGR/16/15*	KX424679	cattle	BVI	Niger	WA
NGR/15/15*	KX424678	cattle	BVI	Niger	WA
NGR/4/2015	KX424680	bovine	WRLFMD	Niger	WA
NGR/24/15*	KX424682	cattle	BVI	Niger	WA
GHA/5/93	AJ303488	bovine	WRLFMD	Ghana	WA
SEN/2/2001	KX424684	cattle	WRLFMD	Senegal	WA
MAU/19/2000	KX258013	n/a	WRLFMD	Mauritania	WA
NIG/21/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/14/2016	n/a	cattle	WRLFMD	Nigeria	EA-3

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
NIG/15/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/16/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/18/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/13/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/12/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/4/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/9/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/7/2016	n/a	sheep	WRLFMD	Nigeria	EA-3
NIG/10/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/11/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/17/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/5/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/6/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/19/2016	n/a	cattle	WRLFMD	Nigeria	EA-3
NIG/15/2009	KX258021	cattle	WRLFMD	Nigeria	EA-3
CAR/59/2010*	KU720572	cattle	PIADC	Cameroon	EA-3
NIG/1/2007	KX258020	cattle	WRLFMD	Nigeria	EA-3
SUD/12/2004	GU566049	bovine	WRLFMD	Sudan	EA-3
SUD/3/2004	GU566046	bovine	WRLFMD	Sudan	EA-3
SUD/16/2004	GU566052	bovine	WRLFMD	Sudan	EA-3
SUD/1/2004	GU566045	bovine	WRLFMD	Sudan	EA-3
SUD/26/2004	GU566054	bovine	WRLFMD	Sudan	EA-3
SUD/15/2004	GU566051	bovine	WRLFMD	Sudan	EA-3
SUD/4/2004	GU566047	bovine	WRLFMD	Sudan	EA-3
SUD/14/2004	GU566050	bovine	WRLFMD	Sudan	EA-3
SUD/9/2004	GU566048	bovine	WRLFMD	Sudan	EA-3
SUD/25/2004	GU566053	bovine	WRLFMD	Sudan	EA-3
SUD/30/2004	GU566055	bovine	WRLFMD	Sudan	EA-3
SUD/2/2005	GU566057	cattle	WRLFMD	Sudan	EA-3
SUD/1/2005	GU566056	cattle	WRLFMD	Sudan	EA-3
SUD/3/2005	GU566058	cattle	WRLFMD	Sudan	EA-3
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
ETH/2/2006	FJ798127	bovine	WRLFMD	Ethiopia	EA-3
ETH/1/2007	FJ798137	cattle	WRLFMD	Ethiopia	EA-3
ETH/3/2004	FJ798109	cattle	WRLFMD	Ethiopia	EA-3
UGA/17/98	HM211075	n/a	WRLFMD	Uganda	EA-4
UGA/3/2002	DQ165077	n/a	WRLFMD	Uganda	EA-2
MAL/1/98	DQ165074	n/a	WRLFMD	Malawi	EA-2
K83/79*	AJ303511	n/a	WRLFMD	Kenya	EA-1
TAI/189/87*	n/a	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
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
UAE/4/2008	KM921876	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/c
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
IRN/31/2009	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

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n/a, not available