

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

## Genotyping Report

FMDV serotype: A  
Country: Vietnam  
Year: 2015, 2016  
Batch: WRLFMD/2016/00037  
No. of sequences: 8  
Report date: 27th January 2017  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska



Copyright © 2017 The Pirbright Institute, Ash Road, Pirbright, Woking GU24 0NF, United Kingdom.

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

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

The contents of this report should not be reproduced without permission.

Virus sample name:	VIT/9/2015
Sender reference:	NCVD F15-61
Location of origin:	Son La
Country of origin:	Vietnam
Date of collection:	14/09/2015
Host species:	water buffalo
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31494, genome 31495, sequence viba_31496, sequencing info 31497	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31500	VIT/10/2015	cattle	99.5	0	A	ASIA	Sea-97	
viba_22625	VIT/7/2014	porcine	96.7	0	A	ASIA	Sea-97	
viba_22621	VIT/6/2014	porcine	96.7	0	A	ASIA	Sea-97	
viba_25318	VIT/1/2015	porcine	96.5	0	A	ASIA	Sea-97	
viba_21426	VIT/59/2013	cattle	96.3	0	A	ASIA	Sea-97	
viba_22617	VIT/3/2014	cattle	96.3	0	A	ASIA	Sea-97	
viba_25326	VIT/3/2015	cattle	96.3	0	A	ASIA	Sea-97	
viba_21394	VIT/35/2013	cattle	96.3	0	A	ASIA	Sea-97	
viba_21410	VIT/54/2013	water buffalo	96.3	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	96.0	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	91.6	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.4	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		85.8	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.8	0	A	ASIA	A22	
viba_594	IRN/1/2011	bovine	81.9	0	A	ASIA	Iran-05	FAR-11
viba_486	TUR/3/2010	cattle	81.8	0	A	ASIA	Iran-05	KSS-09
viba_682	IRN/2/87	bovine	81.8	0	A	ASIA	Iran-87	
viba_688	EGY/1/72	bovine	81.6	0	A	AFRICA	G-II	
viba_636	IRN/78/2009		81.1	0	A	ASIA	Iran-05	FAR-09
viba_173	UGA/13/66	bovine	81.1	0	A	AFRICA	G-VII	

Virus sample name:	VIT/10/2015
Sender reference:	NCVD F15-62
Location of origin:	Son La
Country of origin:	Vietnam
Date of collection:	14/09/2015
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31498, genome 31499, sequence viba_31500, sequencing info 31501	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31496	VIT/9/2015	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_22625	VIT/7/2014	porcine	96.5	0	A	ASIA	Sea-97	
viba_22621	VIT/6/2014	porcine	96.5	0	A	ASIA	Sea-97	
viba_25318	VIT/1/2015	porcine	96.3	0	A	ASIA	Sea-97	
viba_21426	VIT/59/2013	cattle	96.2	0	A	ASIA	Sea-97	
viba_22617	VIT/3/2014	cattle	96.2	0	A	ASIA	Sea-97	
viba_25326	VIT/3/2015	cattle	96.2	0	A	ASIA	Sea-97	
viba_21394	VIT/35/2013	cattle	96.2	0	A	ASIA	Sea-97	
viba_21410	VIT/54/2013	water buffalo	96.2	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	95.9	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	91.8	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		85.6	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_688	EGY/1/72	bovine	81.5	0	A	AFRICA	G-II	
viba_486	TUR/3/2010	cattle	81.5	0	A	ASIA	Iran-05	KSS-09
viba_594	IRN/1/2011	bovine	81.4	0	A	ASIA	Iran-05	FAR-11
viba_682	IRN/2/87	bovine	81.4	0	A	ASIA	Iran-87	
viba_173	UGA/13/66	bovine	80.8	0	A	AFRICA	G-VII	
viba_785	KEN/3/64		80.8	0	A	AFRICA	G-III	

Virus sample name:	VIT/12/2015
Sender reference:	NCVD F15-70
Location of origin:	Son La
Country of origin:	Vietnam
Date of collection:	28/10/2015
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31502, genome 31503, sequence viba_31504, sequencing info 31505	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31508	VIT/13/2015	cattle	100.0	0	A	ASIA	Sea-97	
viba_31516	VIT/1/2016	water buffalo	99.8	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_21151	Amur/3/RUS/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.4	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	93.8	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.9	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.8	0	A	ASIA	Iran-87	
viba_843	SAU/16/95		81.4	0	A	ASIA	G-VII	
viba_589	Bangkok/TAI/60		81.0	0	A	ASIA	A15	
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_791	IRN/125/2010	bovine	80.7	0	A	ASIA	Iran-05	SIS-10
viba_403	TUR/1/2008	cattle	80.7	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	VIT/13/2015
Sender reference:	NCVD F15-72
Location of origin:	Son La
Country of origin:	Vietnam
Date of collection:	28/10/2015
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	13/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31506, genome 31507, sequence viba_31508, sequencing info 31509	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31504	VIT/12/2015	cattle	100.0	0	A	ASIA	Sea-97	
viba_31516	VIT/1/2016	water buffalo	99.8	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_21151	Amur/3/RUS/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.5	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.4	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	93.8	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.9	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.8	0	A	ASIA	Iran-87	
viba_843	SAU/16/95		81.4	0	A	ASIA	G-VII	
viba_589	Bangkok/TAI/60		81.0	0	A	ASIA	A15	
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_791	IRN/125/2010	bovine	80.7	0	A	ASIA	Iran-05	SIS-10
viba_403	TUR/1/2008	cattle	80.7	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	VIT/16/2015
Sender reference:	RAHO3_1
Location of origin:	Quang Tri
Country of origin:	Vietnam
Date of collection:	24/11/2015
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31510, genome 31511, sequence viba_31512, sequencing info 31513	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_25171	MYA/2/2015	bovine	99.7	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.7	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.7	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.5	0	A	ASIA	Sea-97	
viba_21117	Zabaikalsky/RUS/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_20824	GZ-JC/CHA/2013	cattle	99.5	0	A	ASIA	Sea-97	
viba_26004	TAI/24/2015	cattle	99.5	0	A	ASIA	Sea-97	

### 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_122	TAI/7/2003	bovine	93.7	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		89.7	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.2	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.6	0	A	ASIA	Iran-87	
viba_594	IRN/1/2011	bovine	81.1	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.8	0	A	ASIA	Iran-05	FAR-09
viba_589	Bangkok/TAI/60		80.8	0	A	ASIA	A15	
viba_133	IRN/1/2005	cattle	80.7	0	A	ASIA	Iran-05	
viba_429	TUR/33/2008	cattle	80.7	0	A	ASIA	Iran-05	EZM-07

Virus sample name:	VIT/1/2016
Sender reference:	NCVD F16-13
Location of origin:	Son La
Country of origin:	Vietnam
Date of collection:	28/01/2016
Host species:	water buffalo
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	14/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31514, genome 31515, sequence viba_31516, sequencing info 31517	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31508	VIT/13/2015	cattle	99.8	0	A	ASIA	Sea-97	
viba_31504	VIT/12/2015	cattle	99.8	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_21151	Amur/3/RUS/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.2	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.2	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.2	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.2	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	93.7	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.1	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.8	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.8	0	A	ASIA	Iran-87	
viba_843	SAU/16/95		81.4	0	A	ASIA	G-VII	
viba_589	Bangkok/TAI/60		81.0	0	A	ASIA	A15	
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_791	IRN/125/2010	bovine	80.7	0	A	ASIA	Iran-05	SIS-10
viba_403	TUR/1/2008	cattle	80.7	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	VIT/14/2016
Sender reference:	16-11501/1
Location of origin:	Tien Giang
Country of origin:	Vietnam
Date of collection:	12/06/2016
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	17/01/2017
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31518, genome 31519, sequence viba_31520, sequencing info 31521	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31524	VIT/16/2016	porcine	100.0	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.7	0	A	ASIA	Sea-97	
viba_21117	Zabaikalsky/RUS/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_20824	GZ-JC/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	

#### 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_122	TAI/7/2003	bovine	93.8	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		89.9	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.2	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.9	0	A	ASIA	Iran-87	
viba_589	Bangkok/TAI/60		81.1	0	A	ASIA	A15	
viba_843	SAU/16/95		80.8	0	A	ASIA	G-VII	
viba_594	IRN/1/2011	bovine	80.4	0	A	ASIA	Iran-05	FAR-11
viba_429	TUR/33/2008	cattle	80.4	0	A	ASIA	Iran-05	EZM-07
viba_336	IRN/1/96	bovine	80.3	1	A	ASIA	Iran-96	



Virus sample name:	VIT/16/2016
Sender reference:	16-15541
Location of origin:	Tien Giang
Country of origin:	Vietnam
Date of collection:	09/08/2016
Host species:	porcine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	RS1
Harvest date of material:	11/01/2016
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	23/01/2017
Created:	26/01/2017
Last updated:	26/01/2017
VIBASys IDs: sample 31522, genome 31523, sequence viba_31524, sequencing info 31525	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31520	VIT/14/2016	cattle	100.0	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.8	0	A	ASIA	Sea-97	
viba_20812	GZ-HX/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_20820	GZ-ZB/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	99.7	0	A	ASIA	Sea-97	
viba_21117	Zabaikalsky/RUS/2013	cattle	99.7	0	A	ASIA	Sea-97	
viba_20824	GZ-JC/CHA/2013	cattle	99.7	0	A	ASIA	Sea-97	

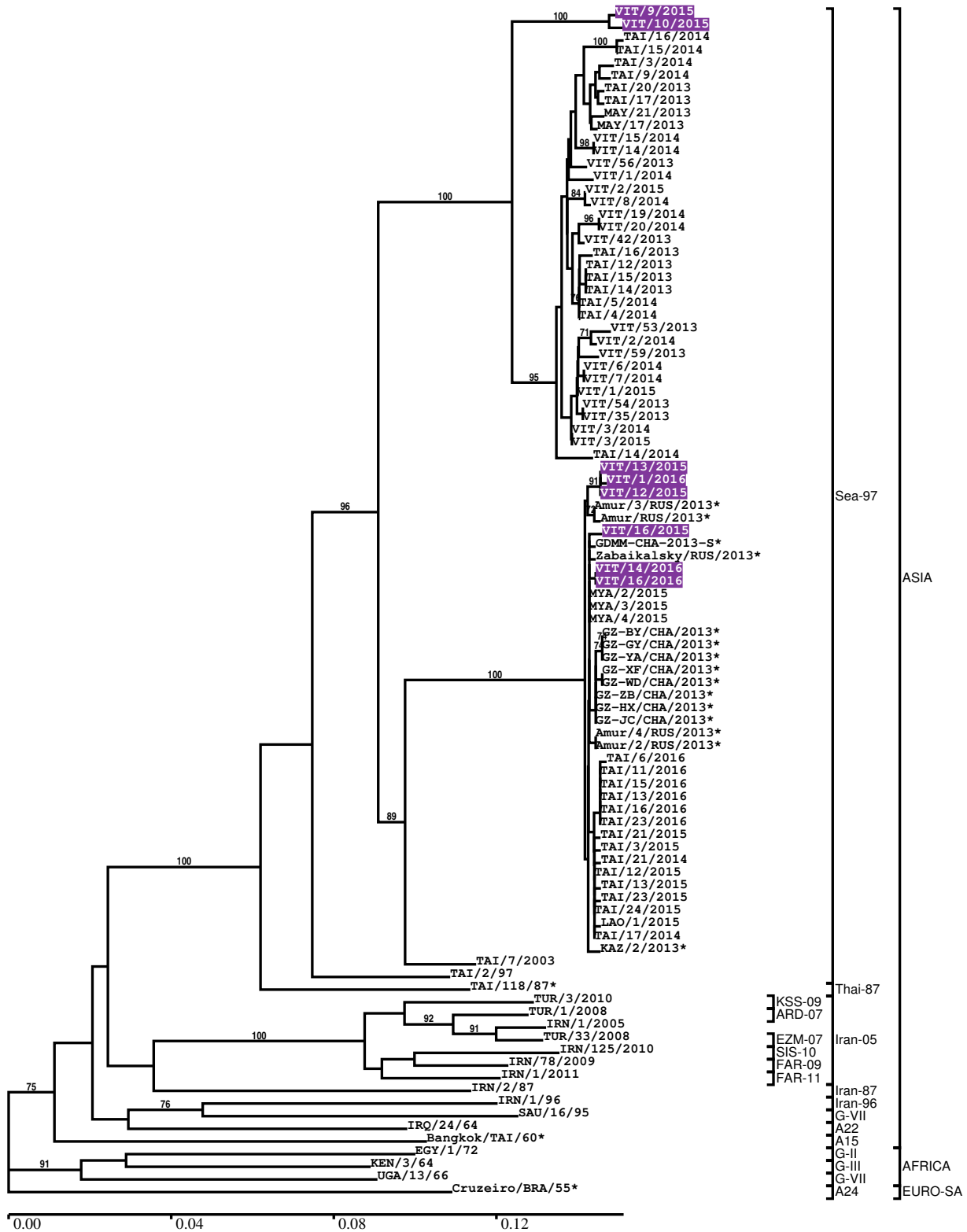
### Most Closely Related Prototype Sequences

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_122	TAI/7/2003	bovine	93.8	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		89.9	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.2	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.9	0	A	ASIA	Iran-87	
viba_589	Bangkok/TAI/60		81.1	0	A	ASIA	A15	
viba_843	SAU/16/95		80.8	0	A	ASIA	G-VII	
viba_594	IRN/1/2011	bovine	80.4	0	A	ASIA	Iran-05	FAR-11
viba_429	TUR/33/2008	cattle	80.4	0	A	ASIA	Iran-05	EZM-07
viba_336	IRN/1/96	bovine	80.3	1	A	ASIA	Iran-96	

Report on FMDV A in Vietnam in 2015, 2016

Batch: WRLFMD/2016/00037



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2016/00037-Vietnam-A (8 sequences)
Sequence database set:	allseqs_A (1548 sequences)
Prototype sequence set:	!prototypes_A (34 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:	18
VIBASys version:	master-1.1.0-17-gf69a4d1

## Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
VIT/9/2015	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/10/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/16/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/9/2014	n/a	water buffalo	WRLFMD	Thailand	ASIA/Sea-97
TAI/20/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/17/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
MAY/21/2013	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
MAY/17/2013	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
VIT/15/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/14/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/56/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/2/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/8/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/19/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/20/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/42/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/16/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/14/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/5/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/4/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
VIT/53/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/2/2014	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/59/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/6/2014	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/7/2014	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2015	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/54/2013	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/35/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/3/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/3/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/14/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
VIT/13/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2016	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/12/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
Amur/3/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Amur/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
VIT/16/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
GDMM-CHA-2013-S*	KF450794	porcine	n/a	China	ASIA/Sea-97
Zabaikalsky/RUS/2013*	n/a	cattle	n/a	Russia	ASIA/Sea-97
VIT/14/2016	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/16/2016	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
MYA/2/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MYA/3/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MYA/4/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
GZ-BY/CHA/2013*	KJ646645	cattle	Guizhou University	China	ASIA/Sea-97
GZ-GY/CHA/2013*	KJ646651	cattle	Guizhou University	China	ASIA/Sea-97
GZ-YA/CHA/2013*	KJ646646	cattle	Guizhou University	China	ASIA/Sea-97
GZ-XF/CHA/2013*	KJ646657	cattle	Guizhou University	China	ASIA/Sea-97
GZ-WD/CHA/2013*	KJ646648	cattle	Guizhou University	China	ASIA/Sea-97
GZ-ZB/CHA/2013*	KJ646649	cattle	Guizhou University	China	ASIA/Sea-97
GZ-HX/CHA/2013*	KJ646647	cattle	Guizhou University	China	ASIA/Sea-97
GZ-JC/CHA/2013*	KJ646650	cattle	Guizhou University	China	ASIA/Sea-97
Amur/4/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Amur/2/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
TAI/6/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/11/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/13/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/16/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/23/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/21/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/21/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2015	n/a	porcine	WRLFMD	Thailand	ASIA/Sea-97
TAI/13/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/23/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/24/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
LAO/1/2015	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/17/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
KAZ/2/2013*	n/a	cattle	ARRIAH	Kazakhstan	ASIA/Sea-97
TAI/7/2003	HQ116312	bovine	WRLFMD	Thailand	ASIA/Sea-97
TAI/2/97	EF208778	n/a	WRLFMD	Thailand	ASIA/Sea-97
TAI/118/87*	EF208777	n/a	WRLFMD	Thailand	ASIA/Thai-87
TUR/3/2010	n/a	cattle	WRLFMD	Turkey	ASIA/Iran-05/KSS-09
TUR/1/2008	FJ755133	cattle	WRLFMD	Turkey	ASIA/Iran-05/ARD-07
IRN/1/2005	EF208769	cattle	WRLFMD	Iran	ASIA/Iran-05
TUR/33/2008	FJ755155	cattle	WRLFMD	Turkey	ASIA/Iran-05/EZM-07
IRN/125/2010	n/a	bovine	WRLFMD	Iran	ASIA/Iran-05/SIS-10
IRN/78/2009	n/a	n/a	WRLFMD	Iran	ASIA/Iran-05/FAR-09
IRN/1/2011	n/a	bovine	WRLFMD	Iran	ASIA/Iran-05/FAR-11
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
IRN/1/96	EF208771	bovine	WRLFMD	Iran	ASIA/Iran-96
SAU/16/95	EU553874	n/a	WRLFMD	Saudi Arabia	ASIA/G-VII
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
Bangkok/TAI/60*	AY593755	n/a	PIADC	Thailand	ASIA/A15
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
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24

\*, not a WRLFMD Reference Number

n/a, not available