

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

## Genotyping Report

FMDV serotype: A  
Country: Vietnam  
Year: 2016, 2017  
Batch: WRLFMD/2018/00011  
No. of sequences: 13  
Report date: 10th May 2018  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska



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

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Virus sample name:	VIT/22/2016
Sender reference:	16-11501
Location of origin:	Binh Phu, Cai Lay, Tien Giang
Country of origin:	Vietnam
Date of collection:	10/06/2016
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	11/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36502, genome 36503, sequence viba_36504, sequencing info 36505	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31512	VIT/16/2015	cattle	99.0	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	98.7	0	A	ASIA	Sea-97	
viba_34090	CAM/5/2016		98.7	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	98.7	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	98.7	0	A	ASIA	Sea-97	
viba_21117	Zabaikalsky/RUS/2013	cattle	98.6	0	A	ASIA	Sea-97	
viba_26004	TAI/24/2015	cattle	98.6	0	A	ASIA	Sea-97	
viba_20799	GDMM-CHA-2013-S	porcine	98.6	0	A	ASIA	Sea-97	
viba_21156	Amur/4/RUS/2013	cattle	98.6	0	A	ASIA	Sea-97	
viba_21147	Amur/2/RUS/2013	cattle	98.6	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		89.4	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.0	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	81.9	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.6	0	A	ASIA	Iran-87	
viba_34671	BAL/PAK/05/2011	cattle	81.3	0	A	ASIA	Iran-05	BAL-11
viba_589	Bangkok/TAI/60		81.0	0	A	ASIA	A15	
viba_594	IRN/1/2011	bovine	80.9	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.8	0	A	ASIA	Iran-05	FAR-09
viba_429	TUR/33/2008	cattle	80.7	0	A	ASIA	Iran-05	EZM-07

Virus sample name:	VIT/26/2016
Sender reference:	16-20280
Location of origin:	Yang Reh, Krong Bong, Dak Lak
Country of origin:	Vietnam
Date of collection:	13/10/2016
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36506, genome 36507, sequence viba_36508, sequencing info 36509	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_21402	VIT/49/2013	cattle	96.3	0	A	ASIA	Sea-97	
viba_25326	VIT/3/2015	cattle	96.2	0	A	ASIA	Sea-97	
viba_22617	VIT/3/2014	cattle	96.2	0	A	ASIA	Sea-97	
viba_25318	VIT/1/2015	porcine	96.0	0	A	ASIA	Sea-97	
viba_22625	VIT/7/2014	porcine	95.9	0	A	ASIA	Sea-97	
viba_21394	VIT/35/2013	cattle	95.9	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	95.9	0	A	ASIA	Sea-97	
viba_20984	MAY/17/2013	cattle	95.9	0	A	ASIA	Sea-97	
viba_22621	VIT/6/2014	porcine	95.9	0	A	ASIA	Sea-97	
viba_21410	VIT/54/2013	water buffalo	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	91.1	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		89.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.3	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.2	0	A	ASIA	Iran-05	FAR-11
viba_677	IRQ/24/64	bovine	82.1	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.8	0	A	ASIA	Iran-87	
viba_636	IRN/78/2009		81.4	0	A	ASIA	Iran-05	FAR-09
viba_429	TUR/33/2008	cattle	81.2	0	A	ASIA	Iran-05	EZM-07
viba_403	TUR/1/2008	cattle	81.2	0	A	ASIA	Iran-05	ARD-07
viba_336	IRN/1/96	bovine	81.1	1	A	ASIA	Iran-96	

Virus sample name:	VIT/6/2017
Sender reference:	17F18
Location of origin:	Chieng Pan, Yen Chau, Son La
Country of origin:	Vietnam
Date of collection:	27/02/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018

VIBASys IDs: sample 36510, genome 36511, sequence viba\_36512, sequencing info 36513

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_31504	VIT/12/2015	cattle	99.8	0	A	ASIA	Sea-97	
viba_31508	VIT/13/2015	cattle	99.8	0	A	ASIA	Sea-97	
viba_31516	VIT/1/2016	water buffalo	99.7	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_21151	Amur/3/RUS/2013	cattle	99.4	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	99.4	0	A	ASIA	Sea-97	
viba_21142	Amur/RUS/2013	cattle	99.2	0	A	ASIA	Sea-97	
viba_21117	Zabaikalsky/RUS/2013	cattle	99.2	0	A	ASIA	Sea-97	
viba_26004	TAI/24/2015	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	82.4	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	81.6	0	A	ASIA	Iran-87	
viba_34671	BAL/PAK/05/2011	cattle	81.4	0	A	ASIA	Iran-05	BAL-11
viba_843	SAU/16/95		81.2	0	A	ASIA	G-VII	
viba_20943	IRN/27/2013	cattle	80.9	0	A	ASIA	Iran-05	SIS-13
viba_589	Bangkok/TAI/60		80.8	0	A	ASIA	A15	
viba_429	TUR/33/2008	cattle	80.7	0	A	ASIA	Iran-05	EZM-07

Virus sample name:	VIT/11/2017
Sender reference:	17-11648
Location of origin:	Krong Na, Buon Don, Dak Lak
Country of origin:	Vietnam
Date of collection:	09/06/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36514, genome 36515, sequence viba_36516, sequencing info 36517	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36520	VIT/12/2017	bovine	99.8	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.7	0	A	ASIA	Sea-97	
viba_36544	VIT/23/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.5	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	92.2	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.5	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.1	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.8	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.1	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.6	0	A	ASIA	Iran-05	BAL-11
viba_429	TUR/33/2008	cattle	81.4	0	A	ASIA	Iran-05	EZM-07
viba_414	AFG/6/2007	bovine	81.4	0	A	ASIA	Iran-05	AFG-07
viba_336	IRN/1/96	bovine	81.4	1	A	ASIA	Iran-96	
viba_34575	BAD/AFG/L2814/2009	cattle	81.3	0	A	ASIA	Iran-05	BAD-09

Virus sample name:	VIT/12/2017
Sender reference:	17-12213
Location of origin:	Ea Lam, Song Hinh, Phu Yen
Country of origin:	Vietnam
Date of collection:	19/06/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36518, genome 36519, sequence viba_36520, sequencing info 36521	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36516	VIT/11/2017	bovine	99.8	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.8	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36544	VIT/23/2017	water buffalo	99.4	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	99.4	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	99.4	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.3	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	92.4	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.3	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.9	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.2	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.7	0	A	ASIA	Iran-05	BAL-11
viba_429	TUR/33/2008	cattle	81.6	0	A	ASIA	Iran-05	EZM-07
viba_336	IRN/1/96	bovine	81.6	1	A	ASIA	Iran-96	
viba_414	AFG/6/2007	bovine	81.5	0	A	ASIA	Iran-05	AFG-07
viba_34575	BAD/AFG/L2814/2009	cattle	81.5	0	A	ASIA	Iran-05	BAD-09

Virus sample name:	VIT/13/2017
Sender reference:	17-13002
Location of origin:	CuNe, Krong Buk, Dak Lak
Country of origin:	Vietnam
Date of collection:	30/06/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36522, genome 36523, sequence viba_36524, sequencing info 36525	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36520	VIT/12/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_36544	VIT/23/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	98.6	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	98.4	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.1	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	92.1	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_594	IRN/1/2011	bovine	82.9	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.2	0	A	ASIA	Iran-05	FAR-09
viba_403	TUR/1/2008	cattle	82.0	0	A	ASIA	Iran-05	ARD-07
viba_486	TUR/3/2010	cattle	81.8	0	A	ASIA	Iran-05	KSS-09
viba_34671	BAL/PAK/05/2011	cattle	81.7	0	A	ASIA	Iran-05	BAL-11
viba_11952	PAK/6/2009	water buffalo	81.7	0	A	ASIA	Pak-09	
viba_429	TUR/33/2008	cattle	81.6	0	A	ASIA	Iran-05	EZM-07

Virus sample name:	VIT/16/2017
Sender reference:	17-15237
Location of origin:	Tinh Hiep, Son Tinh, Quang Ngai
Country of origin:	Vietnam
Date of collection:	05/08/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36526, genome 36527, sequence viba_36528, sequencing info 36529	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36544	VIT/23/2017	water buffalo	99.7	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	99.7	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	99.7	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36520	VIT/12/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	98.6	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	98.6	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.3	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	92.1	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.5	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.0	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.9	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.5	0	A	ASIA	Iran-05	FAR-09
viba_682	IRN/2/87	bovine	82.3	0	A	ASIA	Iran-87	
viba_429	TUR/33/2008	cattle	82.2	0	A	ASIA	Iran-05	EZM-07
viba_331	AFG/10/2010		82.2	0	A	ASIA	Iran-05	HER-10
viba_34671	BAL/PAK/05/2011	cattle	82.0	0	A	ASIA	Iran-05	BAL-11
viba_403	TUR/1/2008	cattle	82.0	0	A	ASIA	Iran-05	ARD-07



Virus sample name:	VIT/17/2017
Sender reference:	17-15697
Location of origin:	Chu Bah, Ayun Pa, Gia Lai
Country of origin:	Vietnam
Date of collection:	09/08/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36530, genome 36531, sequence viba_36532, sequencing info 36533	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36520	VIT/12/2017	bovine	99.8	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.7	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36544	VIT/23/2017	water buffalo	99.2	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	99.2	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	99.2	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	98.7	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.1	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	92.2	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.5	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.4	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.7	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.4	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_331	AFG/10/2010		81.8	0	A	ASIA	Iran-05	HER-10
viba_429	TUR/33/2008	cattle	81.7	0	A	ASIA	Iran-05	EZM-07
viba_34575	BAD/AFG/L2814/2009	cattle	81.6	0	A	ASIA	Iran-05	BAD-09
viba_414	AFG/6/2007	bovine	81.4	0	A	ASIA	Iran-05	AFG-07

Virus sample name:	VIT/19/2017
Sender reference:	17-16615
Location of origin:	Thang Loi, Kon Tum city, Kon Tum
Country of origin:	Vietnam
Date of collection:	24/08/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36534, genome 36535, sequence viba_36536, sequencing info 36537	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36520	VIT/12/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_36544	VIT/23/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	98.9	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	98.6	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	98.4	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	96.8	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	91.9	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.1	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.7	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.4	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_331	AFG/10/2010		81.8	0	A	ASIA	Iran-05	HER-10
viba_414	AFG/6/2007	bovine	81.6	0	A	ASIA	Iran-05	AFG-07
viba_34575	BAD/AFG/L2814/2009	cattle	81.6	0	A	ASIA	Iran-05	BAD-09
viba_429	TUR/33/2008	cattle	81.4	0	A	ASIA	Iran-05	EZM-07

Virus sample name:	VIT/20/2017
Sender reference:	17F50
Location of origin:	Chieng Dong, Yen Chau, Son La
Country of origin:	Vietnam
Date of collection:	29/08/2017
Host species:	bovine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	12/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36538, genome 36539, sequence viba_36540, sequencing info 36541	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36544	VIT/23/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	99.5	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.0	0	A	ASIA	Sea-97	
viba_36520	VIT/12/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	98.7	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	98.4	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	98.4	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.1	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	91.9	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.2	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.1	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.6	0	A	ASIA	Iran-05	FAR-11
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_636	IRN/78/2009		81.9	0	A	ASIA	Iran-05	FAR-09
viba_429	TUR/33/2008	cattle	81.6	0	A	ASIA	Iran-05	EZM-07
viba_414	AFG/6/2007	bovine	81.5	0	A	ASIA	Iran-05	AFG-07
viba_34575	BAD/AFG/L2814/2009	cattle	81.5	0	A	ASIA	Iran-05	BAD-09
viba_336	IRN/1/96	bovine	81.4	1	A	ASIA	Iran-96	

Virus sample name:	VIT/23/2017
Sender reference:	17-17974/2
Location of origin:	Yen Chau, Son La
Country of origin:	Vietnam
Date of collection:	11/09/2017
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:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36542, genome 36543, sequence viba_36544, sequencing info 36545	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36552	VIT/25/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.7	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36520	VIT/12/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.6	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	92.4	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.3	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.8	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.4	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_429	TUR/33/2008	cattle	81.7	0	A	ASIA	Iran-05	EZM-07
viba_414	AFG/6/2007	bovine	81.7	0	A	ASIA	Iran-05	AFG-07
viba_336	IRN/1/96	bovine	81.6	1	A	ASIA	Iran-96	
viba_34575	BAD/AFG/L2814/2009	cattle	81.6	0	A	ASIA	Iran-05	BAD-09

Virus sample name:	VIT/24/2017
Sender reference:	17-17974/3
Location of origin:	Yen Chau, Son La
Country of origin:	Vietnam
Date of collection:	11/09/2017
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:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36546, genome 36547, sequence viba_36548, sequencing info 36549	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36544	VIT/23/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36552	VIT/25/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.7	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36520	VIT/12/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.6	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	92.4	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.3	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.8	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.4	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_429	TUR/33/2008	cattle	81.7	0	A	ASIA	Iran-05	EZM-07
viba_414	AFG/6/2007	bovine	81.7	0	A	ASIA	Iran-05	AFG-07
viba_336	IRN/1/96	bovine	81.6	1	A	ASIA	Iran-96	
viba_34575	BAD/AFG/L2814/2009	cattle	81.6	0	A	ASIA	Iran-05	BAD-09

Virus sample name:	VIT/25/2017
Sender reference:	17-17974/4
Location of origin:	Yen Chau, Son La
Country of origin:	Vietnam
Date of collection:	11/09/2017
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:	13/04/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	30/04/2018
Created:	03/05/2018
Last updated:	03/05/2018
VIBASys IDs: sample 36550, genome 36551, sequence viba_36552, sequencing info 36553	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36544	VIT/23/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36548	VIT/24/2017	water buffalo	100.0	0	A	ASIA	Sea-97	
viba_36528	VIT/16/2017	bovine	99.7	0	A	ASIA	Sea-97	
viba_36540	VIT/20/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36516	VIT/11/2017	bovine	99.5	0	A	ASIA	Sea-97	
viba_36520	VIT/12/2017	bovine	99.4	0	A	ASIA	Sea-97	
viba_36532	VIT/17/2017	bovine	99.2	0	A	ASIA	Sea-97	
viba_36524	VIT/13/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_36536	VIT/19/2017	bovine	98.9	0	A	ASIA	Sea-97	
viba_21398	VIT/42/2013	cattle	97.6	0	A	ASIA	Sea-97	

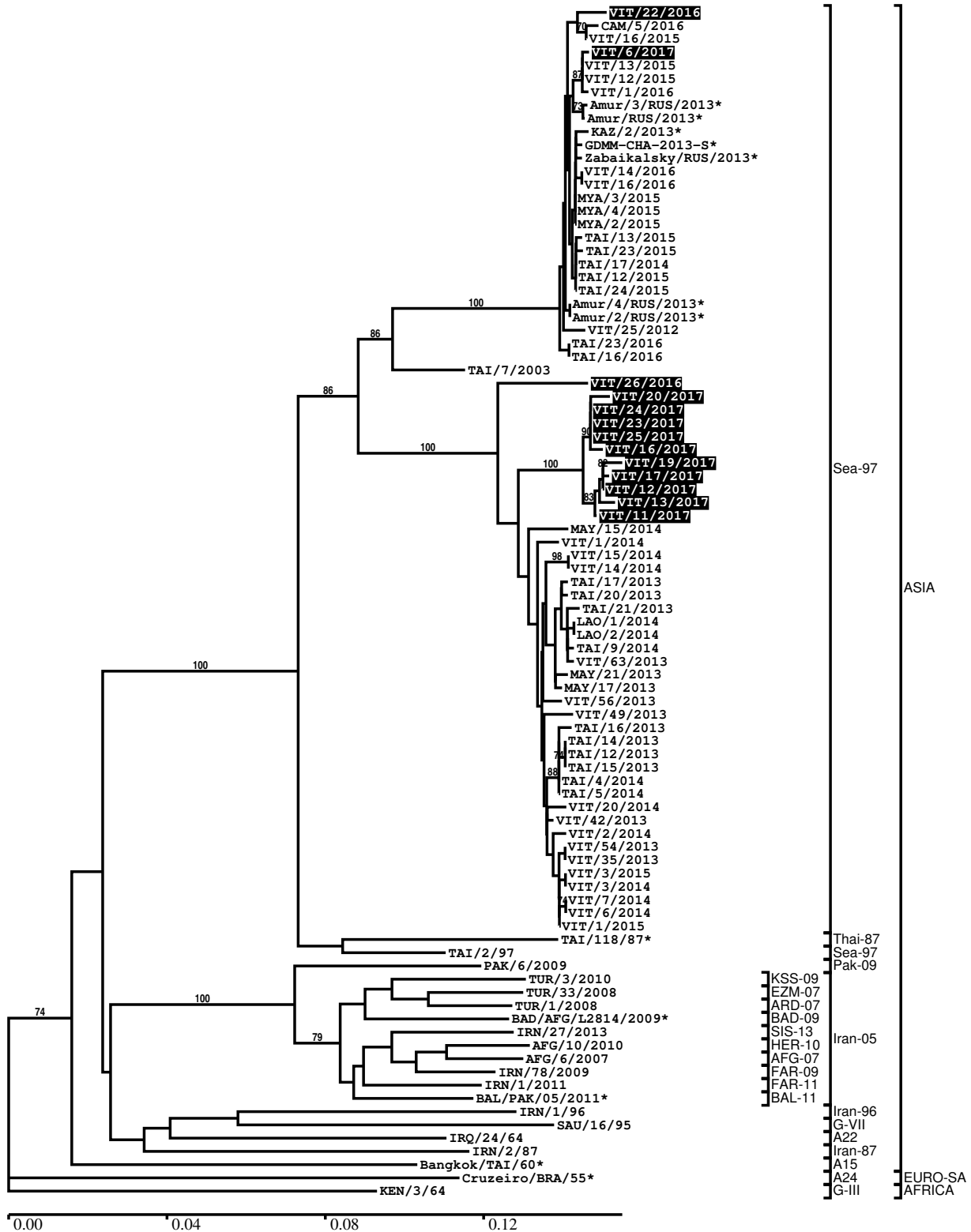
#### Most Closely Related Prototype Sequences

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	92.4	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		90.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		88.3	0	A	ASIA	Thai-87	
viba_594	IRN/1/2011	bovine	82.8	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		82.4	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	81.9	0	A	ASIA	Iran-05	BAL-11
viba_429	TUR/33/2008	cattle	81.7	0	A	ASIA	Iran-05	EZM-07
viba_414	AFG/6/2007	bovine	81.7	0	A	ASIA	Iran-05	AFG-07
viba_336	IRN/1/96	bovine	81.6	1	A	ASIA	Iran-96	
viba_34575	BAD/AFG/L2814/2009	cattle	81.6	0	A	ASIA	Iran-05	BAD-09

Report on FMDV A in Vietnam in 2016, 2017

Batch: WRLFMD/2018/00011



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2018/00011-Vietnam-A (13 sequences)
Sequence database set:	allseqs_A (1827 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:	19
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
VIT/22/2016	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
CAM/5/2016	n/a	n/a	WRLFMD	Cambodia	ASIA/Sea-97
VIT/16/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/6/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/13/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/12/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2016	n/a	water buffalo	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
KAZ/2/2013*	n/a	cattle	ARRIAH	Kazakhstan	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/3/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MYA/4/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MYA/2/2015	n/a	bovine	WRLFMD	Myanmar	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/17/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2015	n/a	porcine	WRLFMD	Thailand	ASIA/Sea-97
TAI/24/2015	n/a	cattle	WRLFMD	Thailand	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
VIT/25/2012	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/23/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/16/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/7/2003	HQ116312	bovine	WRLFMD	Thailand	ASIA/Sea-97
VIT/26/2016	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/20/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/24/2017	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/23/2017	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/25/2017	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/16/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/19/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/17/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97

*continued on next page*



label	accession	host(s)	lab	country	taxonomic information
VIT/12/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/13/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/11/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
MAY/15/2014	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
VIT/1/2014	n/a	cattle	WRLFMD	Vietnam	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
TAI/17/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/20/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/21/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
LAO/1/2014	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
LAO/2/2014	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/9/2014	n/a	water buffalo	WRLFMD	Thailand	ASIA/Sea-97
VIT/63/2013	n/a	cattle	WRLFMD	Vietnam	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/56/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/49/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/16/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/14/2013	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/4/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/5/2014	n/a	cattle	WRLFMD	Thailand	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
VIT/2/2014	n/a	water buffalo	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/3/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/3/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/7/2014	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/6/2014	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2015	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
TAI/118/87*	EF208777	n/a	WRLFMD	Thailand	ASIA/Thai-87
TAI/2/97	EF208778	n/a	WRLFMD	Thailand	ASIA/Sea-97
PAK/6/2009	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Pak-09
TUR/3/2010	KY091294	cattle	WRLFMD	Turkey	ASIA/Iran-05/KSS-09
TUR/33/2008	FJ755155	cattle	WRLFMD	Turkey	ASIA/Iran-05/EZM-07
TUR/1/2008	FJ755133	cattle	WRLFMD	Turkey	ASIA/Iran-05/ARD-07
BAD/AFG/L2814/2009*	HQ439296	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/BAD-09
IRN/27/2013	n/a	cattle	WRLFMD	Iran	ASIA/Iran-05/SIS-13
AFG/10/2010	KY091293	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/HER-10
AFG/6/2007	FJ755007	bovine	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
IRN/78/2009	KY091291	n/a	WRLFMD	Iran	ASIA/Iran-05/FAR-09
IRN/1/2011	KY091292	bovine	WRLFMD	Iran	ASIA/Iran-05/FAR-11
BAL/PAK/05/2011*	KT832824	cattle	Univ Malakand	Pakistan	ASIA/Iran-05/BAL-11
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
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
Bangkok/TAI/60*	AY593755	n/a	PIADC	Thailand	ASIA/A15
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III

\*, not a WRLFMD Reference Number  
n/a, not available