

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

Genotyping Report

FMDV serotype: A
Country: Thailand
Year: 2017
Batch: WRLFMD/2018/00030
No. of sequences: 8
Report date: 9th December 2018
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska



Copyright © 2018 The Pirbright Institute, Ash Road, Pirbright, Woking GU24 0NF, United Kingdom.

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

email: reporting@pirbright.ac.uk

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

Virus sample name:	TAI/6/2017
Sender reference:	16/17
Location of origin:	Saraburi
Country of origin:	Thailand
Date of collection:	22/02/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37634, genome 37635, sequence viba_37636, sequencing info 37637	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33908	TAI/3/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_37656	TAI/11/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_33904	TAI/2/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_33896	TAI/58/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.4	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.7	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.4	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.9	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.2	0	A	ASIA	Iran-05	FAR-11
viba_486	TUR/3/2010	cattle	80.7	0	A	ASIA	Iran-05	KSS-09
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_688	EGY/1/72	bovine	80.6	0	A	AFRICA	G-II	
viba_864	IND/40/2000	cattle	80.5	0	A	ASIA	G-VII	

Virus sample name:	TAI/7/2017
Sender reference:	19/17
Location of origin:	Saraburi
Country of origin:	Thailand
Date of collection:	01/03/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B1 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37638, genome 37639, sequence viba_37640, sequencing info 37641	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33896	TAI/58/2016	cattle	99.7	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	99.7	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_33908	TAI/3/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_37656	TAI/11/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37636	TAI/6/2017	cattle	99.5	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.3	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.7	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.1	0	A	ASIA	Iran-05	FAR-11
viba_486	TUR/3/2010	cattle	80.7	0	A	ASIA	Iran-05	KSS-09
viba_636	IRN/78/2009		80.6	0	A	ASIA	Iran-05	FAR-09
viba_688	EGY/1/72	bovine	80.5	0	A	AFRICA	G-II	
viba_682	IRN/2/87	bovine	80.3	0	A	ASIA	Iran-87	

Virus sample name:	TAI/8/2017
Sender reference:	23/17
Location of origin:	Nakhon Ratchasima
Country of origin:	Thailand
Date of collection:	28/03/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37642, genome 37643, sequence viba_37644, sequencing info 37645	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33896	TAI/58/2016	cattle	99.7	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	99.7	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_33908	TAI/3/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_37656	TAI/11/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37636	TAI/6/2017	cattle	99.5	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_122	TAI/7/2003	bovine	92.5	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		89.9	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.6	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.7	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	82.0	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.4	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.9	0	A	ASIA	Iran-05	FAR-09
viba_486	TUR/3/2010	cattle	80.8	0	A	ASIA	Iran-05	KSS-09
viba_864	IND/40/2000	cattle	80.7	0	A	ASIA	G-VII	
viba_682	IRN/2/87	bovine	80.6	0	A	ASIA	Iran-87	

Virus sample name:	TAI/9/2017
Sender reference:	29-1/17
Location of origin:	Saraburi
Country of origin:	Thailand
Date of collection:	24/04/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R2B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37646, genome 37647, sequence viba_37648, sequencing info 37649	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33896	TAI/58/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_33908	TAI/3/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_37656	TAI/11/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_37636	TAI/6/2017	cattle	99.4	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.4	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.4	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.9	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.2	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_688	EGY/1/72	bovine	80.6	0	A	AFRICA	G-II	
viba_557	IRN/15/2012	bovine	80.6	0	A	ASIA	Iran-05	SIS-12
viba_864	IND/40/2000	cattle	80.5	0	A	ASIA	G-VII	

Virus sample name:	TAI/10/2017
Sender reference:	30/17
Location of origin:	Saraburi
Country of origin:	Thailand
Date of collection:	26/04/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37650, genome 37651, sequence viba_37652, sequencing info 37653	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33884	TAI/53/2016	cattle	99.8	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	99.8	0	A	ASIA	Sea-97	
viba_33896	TAI/58/2016	cattle	99.7	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33908	TAI/3/2017	cattle	99.2	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	99.2	0	A	ASIA	Sea-97	
viba_37656	TAI/11/2017	cattle	99.2	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.6	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.3	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	82.0	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.1	0	A	ASIA	Iran-05	FAR-11
viba_688	EGY/1/72	bovine	81.0	0	A	AFRICA	G-II	
viba_636	IRN/78/2009		80.9	0	A	ASIA	Iran-05	FAR-09
viba_486	TUR/3/2010	cattle	80.5	0	A	ASIA	Iran-05	KSS-09
viba_34671	BAL/PAK/05/2011	cattle	80.5	0	A	ASIA	Iran-05	BAL-11

Virus sample name:	TAI/11/2017
Sender reference:	32/17
Location of origin:	Saraburi
Country of origin:	Thailand
Date of collection:	26/04/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37654, genome 37655, sequence viba_37656, sequencing info 37657	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_33908	TAI/3/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_37636	TAI/6/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_33904	TAI/2/2017	cattle	100.0	0	A	ASIA	Sea-97	
viba_33896	TAI/58/2016	cattle	99.5	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	99.5	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	99.4	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	99.4	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	99.4	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.7	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.4	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.5	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.9	0	A	ASIA	Iran-05	BAD-09
viba_594	IRN/1/2011	bovine	81.2	0	A	ASIA	Iran-05	FAR-11
viba_486	TUR/3/2010	cattle	80.7	0	A	ASIA	Iran-05	KSS-09
viba_636	IRN/78/2009		80.7	0	A	ASIA	Iran-05	FAR-09
viba_688	EGY/1/72	bovine	80.6	0	A	AFRICA	G-II	
viba_864	IND/40/2000	cattle	80.5	0	A	ASIA	G-VII	

Virus sample name:	TAI/17/2017
Sender reference:	128/17
Location of origin:	Nakhon Si Thammarat
Country of origin:	Thailand
Date of collection:	18/12/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37658, genome 37659, sequence viba_37660, sequencing info 37661	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_37664	TAI/19/2017	cattle	99.8	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	97.8	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	97.8	0	A	ASIA	Sea-97	
viba_33896	TAI/58/2016	cattle	97.6	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	97.6	0	A	ASIA	Sea-97	
viba_37652	TAI/10/2017	cattle	97.6	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	97.5	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	97.5	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	97.3	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	97.3	0	A	ASIA	Sea-97	

Most Closely Related Prototype Sequences

see 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		89.3	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.3	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.4	0	A	ASIA	Iran-05	BAD-09
viba_864	IND/40/2000	cattle	81.2	0	A	ASIA	G-VII	
viba_336	IRN/1/96	bovine	81.2	1	A	ASIA	Iran-96	
viba_594	IRN/1/2011	bovine	81.1	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.6	0	A	ASIA	Iran-05	FAR-09
viba_699	UKG/119/32		80.6	0	A	EURO-SA	A12	

Virus sample name:	TAI/19/2017
Sender reference:	166-1/17
Location of origin:	Nakhon Si Thammarat
Country of origin:	Thailand
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	R3B2 BTy1
Harvest date of material:	29/11/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	06/12/2018
Created:	08/12/2018
Last updated:	08/12/2018
VIBASys IDs: sample 37662, genome 37663, sequence viba_37664, sequencing info 37665	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_37660	TAI/17/2017	cattle	99.8	0	A	ASIA	Sea-97	
viba_33884	TAI/53/2016	cattle	97.9	0	A	ASIA	Sea-97	
viba_33916	TAI/5/2017	cattle	97.9	0	A	ASIA	Sea-97	
viba_33896	TAI/58/2016	cattle	97.8	0	A	ASIA	Sea-97	
viba_37644	TAI/8/2017	cattle	97.8	0	A	ASIA	Sea-97	
viba_37652	TAI/10/2017	cattle	97.8	0	A	ASIA	Sea-97	
viba_33888	TAI/54/2016	cattle	97.6	0	A	ASIA	Sea-97	
viba_33912	TAI/4/2017	cattle	97.6	0	A	ASIA	Sea-97	
viba_37648	TAI/9/2017	cattle	97.5	0	A	ASIA	Sea-97	
viba_37640	TAI/7/2017	cattle	97.5	0	A	ASIA	Sea-97	

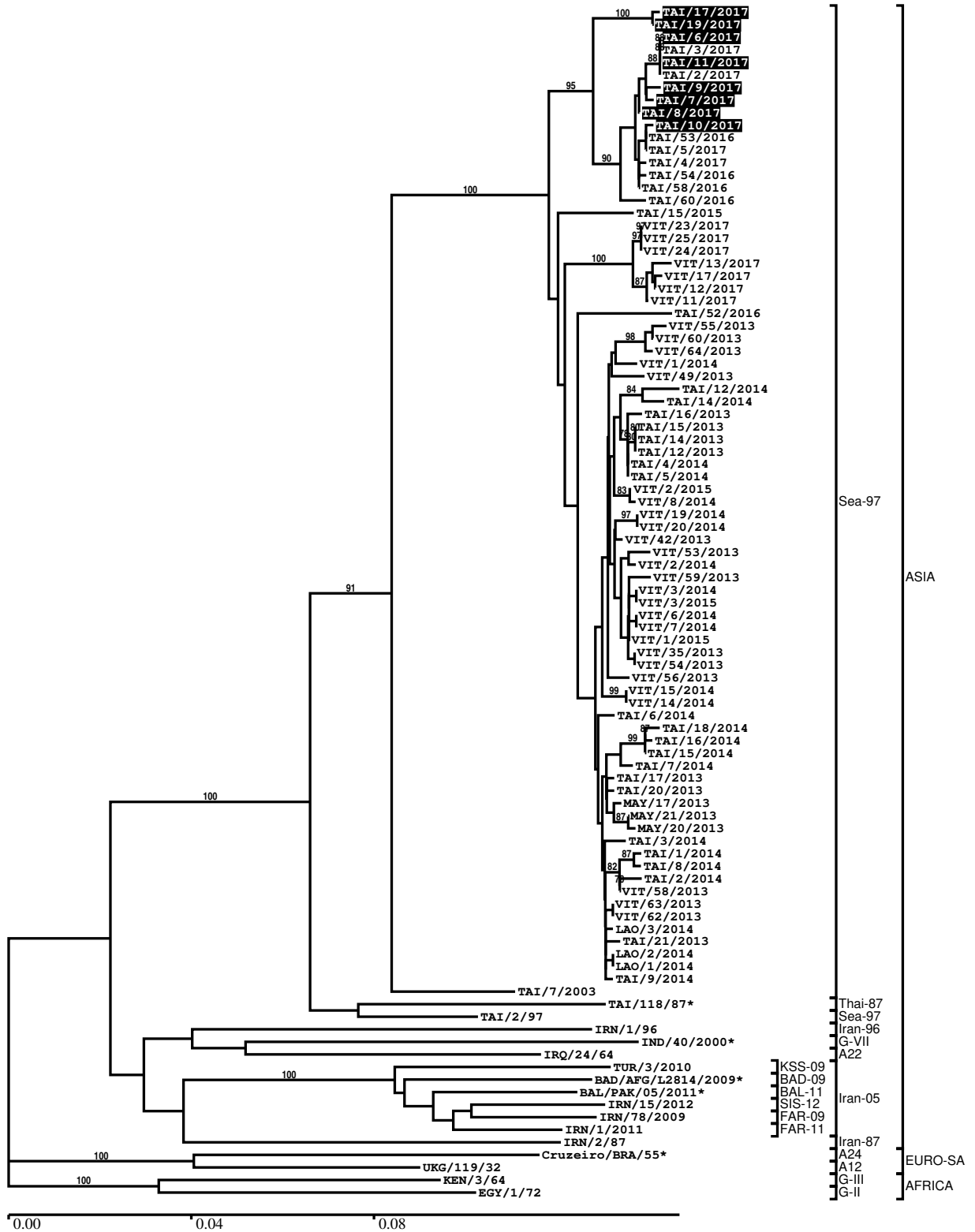
Most Closely Related Prototype Sequences

see 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		89.3	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		86.3	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.3	0	A	ASIA	A22	
viba_34575	BAD/AFG/L2814/2009	cattle	81.4	0	A	ASIA	Iran-05	BAD-09
viba_864	IND/40/2000	cattle	81.2	0	A	ASIA	G-VII	
viba_336	IRN/1/96	bovine	81.2	1	A	ASIA	Iran-96	
viba_594	IRN/1/2011	bovine	81.1	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		80.6	0	A	ASIA	Iran-05	FAR-09
viba_699	UKG/119/32		80.6	0	A	EURO-SA	A12	

Report on FMDV A in Thailand in 2017

Batch: WRLFMD/2018/00030



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2018/00030-Thailand-A (8 sequences)
Sequence database set:	allseqs_A (1894 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:	15
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
TAI/17/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/19/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/6/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/11/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/2/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/9/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/7/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/8/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/10/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/53/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/5/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/4/2017	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/54/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/58/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/60/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2015	n/a	cattle	WRLFMD	Thailand	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/24/2017	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/13/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/17/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/12/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/11/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
TAI/52/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
VIT/55/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/60/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/64/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/49/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/12/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/14/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/16/2013	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/12/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97

continued on next page

label	accession	host(s)	lab	country	taxonomic information
TAI/4/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/5/2014	n/a	cattle	WRLFMD	Thailand	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
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/3/2014	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/3/2015	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/35/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/54/2013	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/56/2013	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/6/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/18/2014	n/a	cattle	WRLFMD	Thailand	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/7/2014	n/a	cattle	WRLFMD	Thailand	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
MAY/17/2013	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
MAY/21/2013	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
MAY/20/2013	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
TAI/3/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/1/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/8/2014	n/a	water buffalo	WRLFMD	Thailand	ASIA/Sea-97
TAI/2/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
VIT/58/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/63/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/62/2013	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
LAO/3/2014	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/21/2013	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
LAO/2/2014	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
LAO/1/2014	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/9/2014	n/a	water buffalo	WRLFMD	Thailand	ASIA/Sea-97
TAI/7/2003	HQ116312	bovine	WRLFMD	Thailand	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
IRN/1/96	EF208771	bovine	WRLFMD	Iran	ASIA/Iran-96
IND/40/2000*	AF390646	cattle	PD-FMD	India	ASIA/G-VII
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
TUR/3/2010	KY091294	cattle	WRLFMD	Turkey	ASIA/Iran-05/KSS-09
BAD/AFG/L2814/2009*	HQ439296	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/BAD-09
BAL/PAK/05/2011*	KT832824	cattle	Univ Malakand	Pakistan	ASIA/Iran-05/BAL-11
IRN/15/2012	KY091297	bovine	WRLFMD	Iran	ASIA/Iran-05/SIS-12
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
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
UKG/119/32	M10975	n/a	PIADC	United Kingdom	EURO-SA/A12
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III
EGY/1/72	EF208756	bovine	WRLFMD	Egypt	AFRICA/G-II

*, not a WRLFMD Reference Number

n/a, not available