

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

Genotyping Report

FMDV serotype: A
Country: Malaysia
Year: 2014
Batch: WRLFMD/2016/00028
No. of sequences: 1
Report date: 6th October 2016
Report generated by: Kasia Bankowska
Report checked by: Nick Knowles



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

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Virus sample name:	MAY/15/2014
Sender reference:	MVKKB 4759/14
Location of origin:	Skhs Kg Bukit Tandak, Pasir Mas, Rantau Panjang, Kelantan
Country of origin:	Malaysia
Date of collection:	27/08/2014
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	09/09/2016
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	29/09/2016
Created:	04/10/2016
Last updated:	04/10/2016

VIBASys IDs: sample 30115, genome 30116, sequence viba_30117, sequencing info 30118

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_22504	TAI/12/2014	cattle	98.4	0	A	ASIA	Sea-97	
viba_22508	TAI/14/2014	cattle	98.4	0	A	ASIA	Sea-97	
viba_21394	VIT/35/2013	cattle	98.1	0	A	ASIA	Sea-97	
viba_21410	VIT/54/2013	water buffalo	98.1	0	A	ASIA	Sea-97	
viba_22629	VIT/8/2014	cattle	98.1	0	A	ASIA	Sea-97	
viba_22479	TAI/4/2014	cattle	97.9	0	A	ASIA	Sea-97	
viba_25318	VIT/1/2015	porcine	97.9	0	A	ASIA	Sea-97	
viba_25322	VIT/2/2015	cattle	97.9	0	A	ASIA	Sea-97	
viba_22484	TAI/5/2014	cattle	97.9	0	A	ASIA	Sea-97	
viba_22617	VIT/3/2014	cattle	97.8	0	A	ASIA	Sea-97	

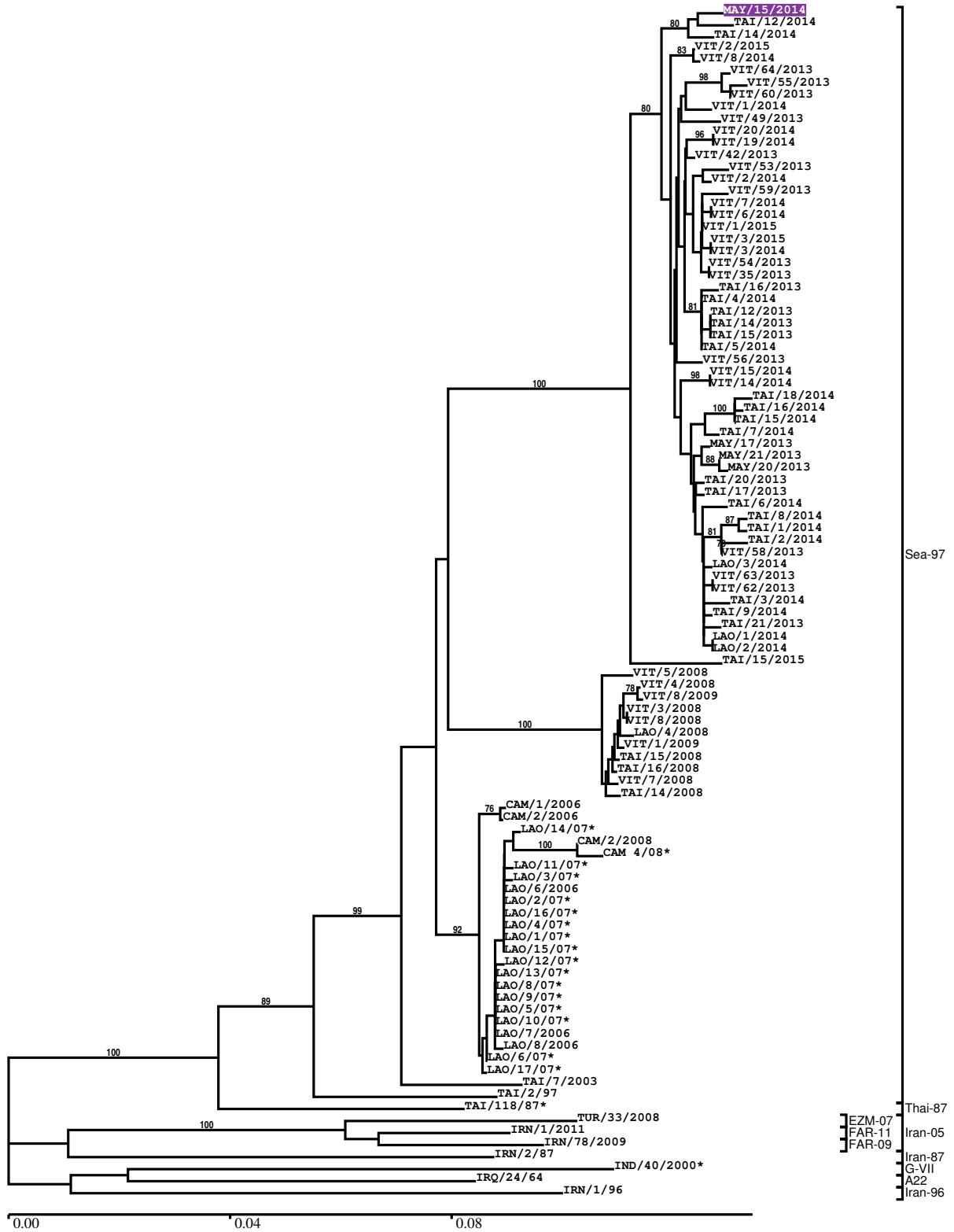
Most Closely Related Prototype Sequences

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		90.3	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		87.9	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	82.0	0	A	ASIA	A22	
viba_336	IRN/1/96	bovine	81.7	1	A	ASIA	Iran-96	
viba_594	IRN/1/2011	bovine	81.5	0	A	ASIA	Iran-05	FAR-11
viba_636	IRN/78/2009		81.3	0	A	ASIA	Iran-05	FAR-09
viba_682	IRN/2/87	bovine	81.3	0	A	ASIA	Iran-87	
viba_429	TUR/33/2008	cattle	81.2	0	A	ASIA	Iran-05	EZM-07
viba_864	IND/40/2000	cattle	80.9	0	A	ASIA	G-VII	

Report on FMDV A in Malaysia in 2014

Batch: WRLFMD/2016/00028



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2016/00028-Malaysia-A (1 sequences)
Sequence database set:	allseqs_A (1529 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:	10
VIBASys version:	reflabs-1.1.0

Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
MAY/15/2014	n/a	cattle	WRLFMD	Malaysia	Sea-97
TAI/12/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/14/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
VIT/2/2015	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/8/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/64/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/55/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/60/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/1/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/49/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/20/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/19/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/42/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/53/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/2/2014	n/a	water buffalo	WRLFMD	Vietnam	Sea-97
VIT/59/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/7/2014	n/a	porcine	WRLFMD	Vietnam	Sea-97
VIT/6/2014	n/a	porcine	WRLFMD	Vietnam	Sea-97
VIT/1/2015	n/a	porcine	WRLFMD	Vietnam	Sea-97
VIT/3/2015	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/3/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/54/2013	n/a	water buffalo	WRLFMD	Vietnam	Sea-97
VIT/35/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
TAI/16/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/4/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/12/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/14/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/15/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/5/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
VIT/56/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/15/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/14/2014	n/a	cattle	WRLFMD	Vietnam	Sea-97
TAI/18/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/16/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/15/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/7/2014	n/a	cattle	WRLFMD	Thailand	Sea-97

continued on next page

label	accession	host(s)	lab	country	taxonomic information
MAY/17/2013	n/a	cattle	WRLFMD	Malaysia	Sea-97
MAY/21/2013	n/a	cattle	WRLFMD	Malaysia	Sea-97
MAY/20/2013	n/a	cattle	WRLFMD	Malaysia	Sea-97
TAI/20/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/17/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/6/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/8/2014	n/a	water buffalo	WRLFMD	Thailand	Sea-97
TAI/1/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/2/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
VIT/58/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
LAO/3/2014	n/a	cattle	WRLFMD	Laos	Sea-97
VIT/63/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
VIT/62/2013	n/a	cattle	WRLFMD	Vietnam	Sea-97
TAI/3/2014	n/a	cattle	WRLFMD	Thailand	Sea-97
TAI/9/2014	n/a	water buffalo	WRLFMD	Thailand	Sea-97
TAI/21/2013	n/a	cattle	WRLFMD	Thailand	Sea-97
LAO/1/2014	n/a	cattle	WRLFMD	Laos	Sea-97
LAO/2/2014	n/a	cattle	WRLFMD	Laos	Sea-97
TAI/15/2015	n/a	cattle	WRLFMD	Thailand	Sea-97
VIT/5/2008	HQ116373	cattle	WRLFMD	Vietnam	Sea-97
VIT/4/2008	HQ116372	water buffalo	WRLFMD	Vietnam	Sea-97
VIT/8/2009	HQ116384	water buffalo	WRLFMD	Vietnam	Sea-97
VIT/3/2008	HQ116371	cattle	WRLFMD	Vietnam	Sea-97
VIT/8/2008	HQ116376	cattle	WRLFMD	Vietnam	Sea-97
LAO/4/2008	HQ116295	cattle	WRLFMD	Laos	Sea-97
VIT/1/2009	HQ116377	cattle	WRLFMD	Vietnam	Sea-97
TAI/15/2008	HQ116343	cattle	WRLFMD	Thailand	Sea-97
TAI/16/2008	HQ116344	cattle	WRLFMD	Thailand	Sea-97
VIT/7/2008	HQ116375	water buffalo	WRLFMD	Vietnam	Sea-97
TAI/14/2008	HQ116342	cattle	WRLFMD	Thailand	Sea-97
CAM/1/2006	HQ116292	cattle	WRLFMD	Cambodia	Sea-97
CAM/2/2006	HQ116293	cattle	WRLFMD	Cambodia	Sea-97
LAO/14/07*	n/a	n/a	TRRL	Laos	Sea-97
CAM/2/2008	HQ116294	cattle	WRLFMD	Cambodia	Sea-97
CAM 4/08*	n/a	n/a	TRRL	Cambodia	Sea-97
LAO/11/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/3/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/6/2006	EU667457	cattle	WRLFMD	Laos	Sea-97
LAO/2/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/16/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/4/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/1/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/15/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/12/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/13/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/8/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/9/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/5/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/10/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/7/2006	EU667458	cattle	WRLFMD	Laos	Sea-97
LAO/8/2006	EU667459	cattle	WRLFMD	Laos	Sea-97
LAO/6/07*	n/a	n/a	TRRL	Laos	Sea-97
LAO/17/07*	n/a	n/a	TRRL	Laos	Sea-97
TAI/7/2003	HQ116312	bovine	WRLFMD	Thailand	Sea-97
TAI/2/97	EF208778	n/a	WRLFMD	Thailand	Sea-97
TAI/118/87*	EF208777	n/a	WRLFMD	Thailand	Thai-87
TUR/33/2008	FJ755155	cattle	WRLFMD	Turkey	Iran-05/EZM-07
IRN/1/2011	n/a	bovine	WRLFMD	Iran	Iran-05/FAR-11
IRN/78/2009	n/a	n/a	WRLFMD	Iran	Iran-05/FAR-09
IRN/2/87	EF208770	bovine	WRLFMD	Iran	Iran-87
IND/40/2000*	AF390646	cattle	PD-FMD	India	G-VII
IRQ/24/64	AY593763	bovine	PIADC	Iraq	A22
IRN/1/96	EF208771	bovine	WRLFMD	Iran	Iran-96

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