

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

Genotyping Report

FMDV serotype: O
Country: Laos
Year: 2018
Batch: WRLFMD/2018/00029
No. of sequences: 1
Report date: 14th December 2018
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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

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Virus sample name:	LAO/1/2018
Sender reference:	LAO 9/18
Location of origin:	n/a
Country of origin:	Laos
Date of collection:	22/01/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia
Sublineage:	
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	10% epi susp
Harvest date of material:	n/a
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	12/12/2018
Created:	14/12/2018
Last updated:	14/12/2018
VIBASys IDs: sample 37705, genome 37706, sequence viba_37707, sequencing info 37708	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_37668	TAI/12/2017	cattle	99.8	0	O	ME-SA	PanAsia	
viba_35454	BaTri/VIT/17-19372	cattle	99.5	0	O	ME-SA	PanAsia	
viba_36497	VIT/1/2018	bovine	99.5	0	O	ME-SA	PanAsia	
viba_36481	VIT/29/2017	bovine	99.5	0	O	ME-SA	PanAsia	
viba_37680	TAI/16/2017	cattle	99.5	0	O	ME-SA	PanAsia	
viba_36461	VIT/18/2017	bovine	99.5	0	O	ME-SA	PanAsia	
viba_37696	TAI/5/2018	cattle	99.4	0	O	ME-SA	PanAsia	
viba_37688	TAI/3/2018	cattle	99.4	0	O	ME-SA	PanAsia	
viba_36493	VIT/32/2017	bovine	99.2	0	O	ME-SA	PanAsia	
viba_36489	VIT/31/2017	bovine	99.1	0	O	ME-SA	PanAsia	

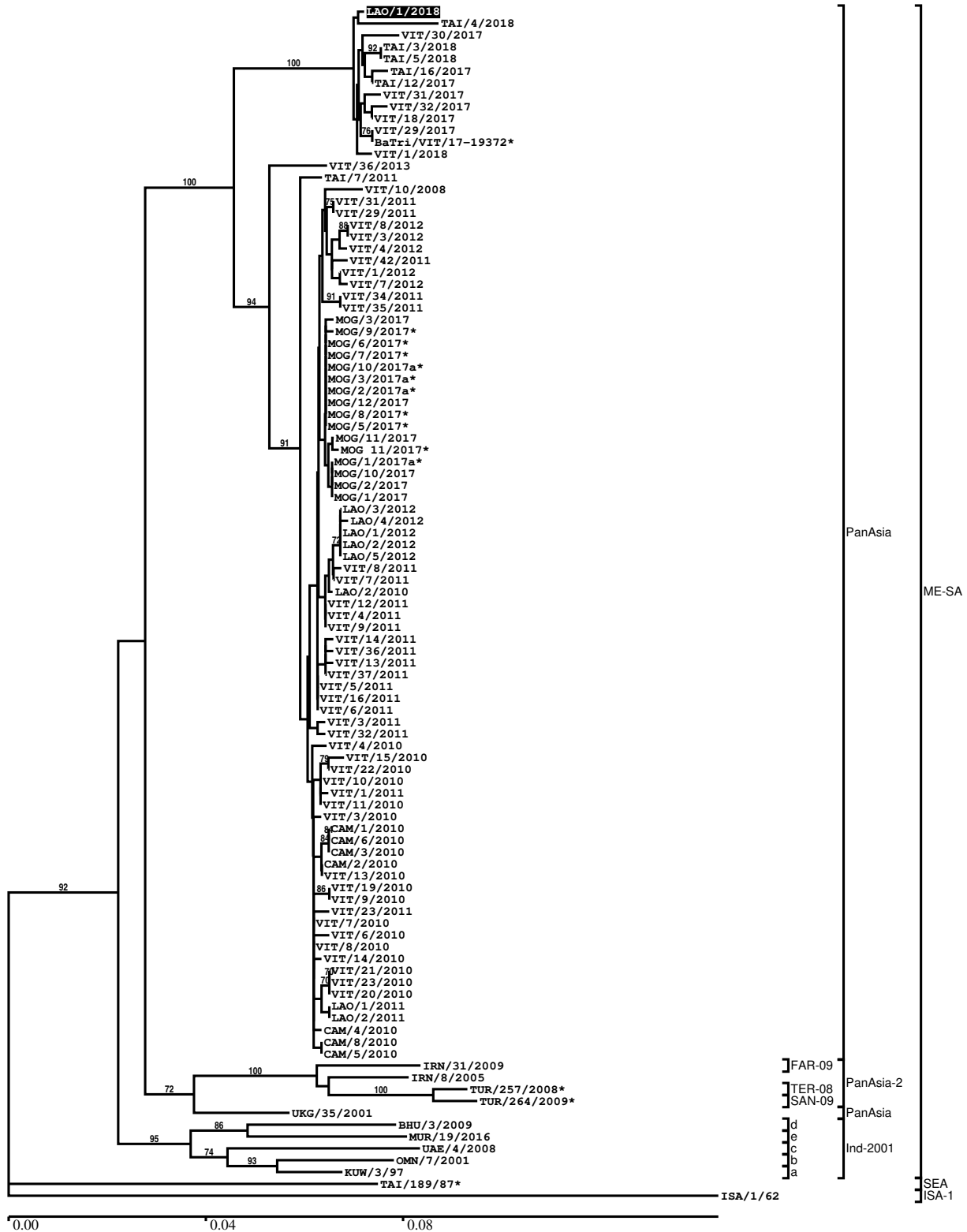
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_285	UKG/35/2001	porcine	91.8	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	91.2	0	O	ME-SA	Ind-2001	a
viba_293	BHU/3/2009	cattle	90.8	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.5	0	O	ME-SA	Ind-2001	b
viba_505	TUR/264/2009		90.0	0	O	ME-SA	PanAsia-2	SAN-09
viba_30238	MUR/19/2016	cattle	89.9	0	O	ME-SA	Ind-2001	e
viba_650	IRN/8/2005	ovine	89.9	0	O	ME-SA	PanAsia-2	
viba_766	IRN/31/2009	cattle	89.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_397	UAE/4/2008	gazelle	89.6	0	O	ME-SA	Ind-2001	c
viba_491	TUR/257/2008		89.4	0	O	ME-SA	PanAsia-2	TER-08

Report on FMDV O in Laos in 2018

Batch: WRLFMD/2018/00029



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2018/00029-Laos-O (1 sequences)
Sequence database set:	allseqs_O (3917 sequences)
Prototype sequence set:	!prototypes_O (49 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:	10
VIBASys version:	reflabs-1.1.2

Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
LAO/1/2018	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
TAI/4/2018	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
VIT/30/2017	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
TAI/3/2018	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
TAI/5/2018	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
TAI/16/2017	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
TAI/12/2017	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
VIT/31/2017	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/32/2017	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/18/2017	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/29/2017	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
BaTri/VIT/17-19372*	n/a	cattle	RAHO6	Vietnam	ME-SA/PanAsia
VIT/1/2018	n/a	bovine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/36/2013	KX944726	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
TAI/7/2011	n/a	cattle	WRLFMD	Thailand	ME-SA/PanAsia
VIT/10/2008	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/31/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/29/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/8/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/3/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/4/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/42/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/1/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/7/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/34/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/35/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
MOG/3/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/9/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/6/2017*	n/a	gazelle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/7/2017*	n/a	gazelle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/10/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/3/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/2/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/12/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/8/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/5/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia

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label	accession	host(s)	lab	country	taxonomic information
MOG/11/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG 11/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/1/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/10/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/2/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/1/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
LAO/3/2012	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
LAO/4/2012	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
LAO/1/2012	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
LAO/2/2012	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
LAO/5/2012	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
VIT/8/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/7/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
LAO/2/2010	n/a	cattle	WRLFMD	Laos	ME-SA/PanAsia
VIT/12/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/4/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/9/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/14/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/36/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/13/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/37/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/5/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/16/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/6/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/3/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/32/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/4/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/15/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/22/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/10/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/1/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/11/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/3/2010	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
CAM/1/2010	n/a	cattle	WRLFMD	Cambodia	ME-SA/PanAsia
CAM/6/2010	n/a	cattle	WRLFMD	Cambodia	ME-SA/PanAsia
CAM/3/2010	n/a	n/a	WRLFMD	Cambodia	ME-SA/PanAsia
CAM/2/2010	n/a	cattle	WRLFMD	Cambodia	ME-SA/PanAsia
VIT/13/2010	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/19/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/9/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/23/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/7/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/6/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/8/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/14/2010	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/21/2010	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/23/2010	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/20/2010	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
LAO/1/2011	n/a	water buffalo	WRLFMD	Laos	ME-SA/PanAsia
LAO/2/2011	n/a	water buffalo	WRLFMD	Laos	ME-SA/PanAsia
CAM/4/2010	n/a	n/a	WRLFMD	Cambodia	ME-SA/PanAsia
CAM/8/2010	n/a	cattle	WRLFMD	Cambodia	ME-SA/PanAsia
CAM/5/2010	n/a	n/a	WRLFMD	Cambodia	ME-SA/PanAsia
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
TUR/257/2008*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/TER-08
TUR/264/2009*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/SAN-09
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
UAE/4/2008	KM921876	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/c
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

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