

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

Genotyping Report

FMDV serotype: O
Country: Myanmar
Year: 2016
Batch: WRLFMD/2016/00033
No. of sequences: 1
Report date: 9th November 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:	MYA/3/2016
Sender reference:	MYA12/16
Location of origin:	Kaingyi, Maung Taw, Rakhine
Country of origin:	Myanmar
Date of collection:	29/06/2016
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	OS
Harvest date of material:	14/10/2016
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	07/11/2016
Created:	08/11/2016
Last updated:	08/11/2016
VIBASys IDs: sample 30484, genome 30485, sequence viba_30486, sequencing info 30487	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30044	MYA12-2016 2		100.0	0	O	ME-SA	Ind-2001	d
viba_30048	MYA13-2016		99.8	0	O	ME-SA	Ind-2001	d
viba_26117	NEP/17/2015	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_29907	NEP/28/2015	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_29927	NEP/6/2016	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_26125	NEP/19/2015	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_29931	NEP/7/2016	cattle	99.1	0	O	ME-SA	Ind-2001	d
viba_29923	NEP/5/2016	cattle	99.1	0	O	ME-SA	Ind-2001	d
viba_29955	NEP/13/2016	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_30011	3A/MAUR/2016	bovine	98.9	0	O	ME-SA	Ind-2001	d

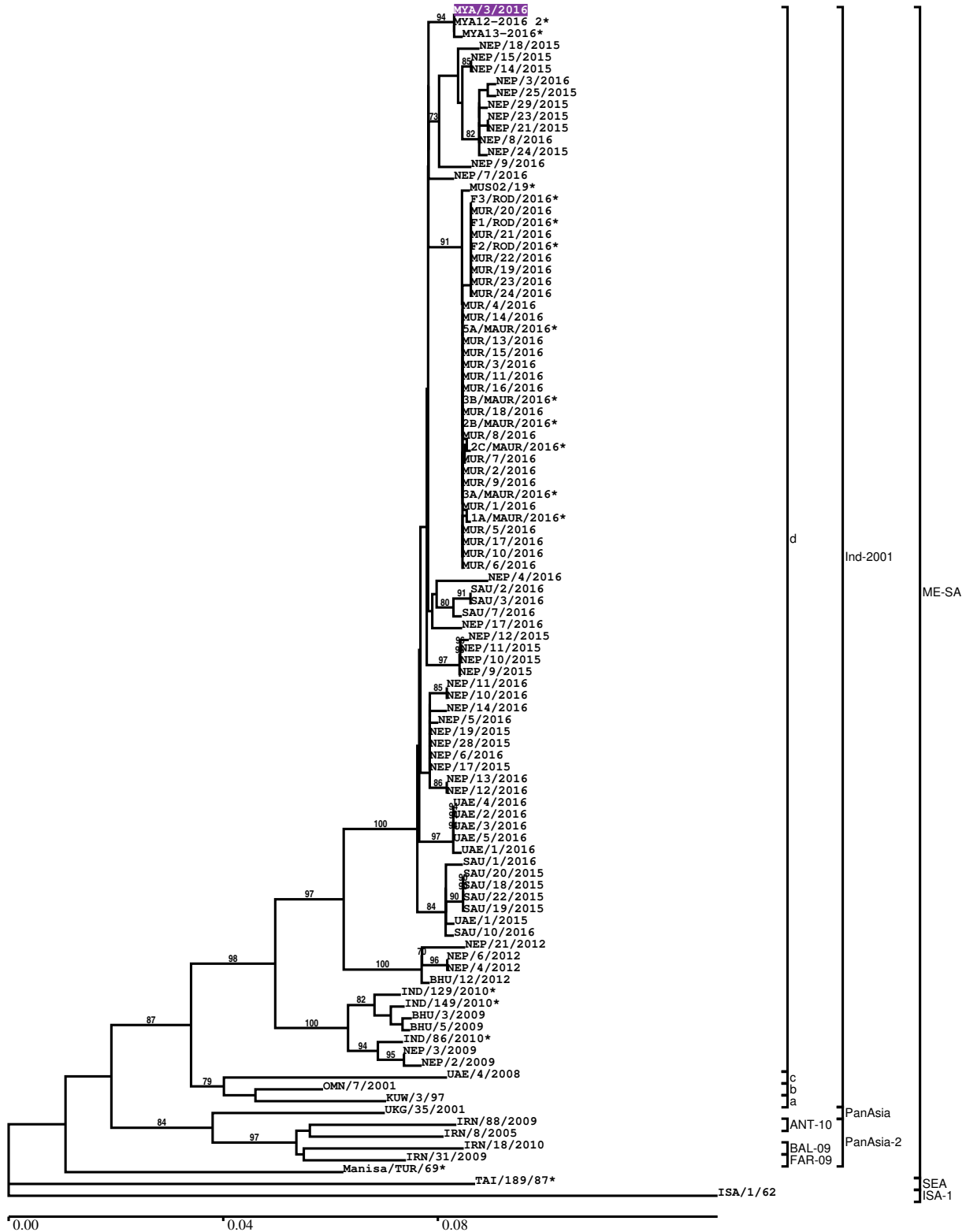
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	94.2	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.9	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.6	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.7	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.8	0	O	ME-SA	PanAsia-2	FAR-09
viba_359	Manisa/TUR/69		88.6	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_719	IRN/88/2009		88.3	0	O	ME-SA	PanAsia-2	ANT-10
viba_650	IRN/8/2005	ovine	88.3	0	O	ME-SA	PanAsia-2	

Report on FMDV O in Myanmar in 2016

Batch: WRLFMD/2016/00033



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2016/00033-Myanmar-O (1 sequences)
Sequence database set:	allseqs_O (3170 sequences)
Prototype sequence set:	!prototypes_O (47 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-1.1.0

Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
MYA/3/2016	n/a	cattle	WRLFMD	Myanmar	ME-SA/Ind-2001/d
MYA12-2016 2*	n/a	n/a	TRRL	Myanmar	ME-SA/Ind-2001/d
MYA13-2016*	n/a	n/a	TRRL	Myanmar	ME-SA/Ind-2001/d
NEP/18/2015	n/a	porcine	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/15/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/14/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/3/2016	n/a	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/25/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/29/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/23/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/21/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/8/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/24/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/9/2016	n/a	porcine	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/7/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
MUS02/19*	n/a	bovine	BVI	Mauritius	ME-SA/Ind-2001/d
F3/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/20/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
F1/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/21/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
F2/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/22/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/19/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/23/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/24/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/4/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/14/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
5A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/13/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/15/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/3/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/11/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/16/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
3B/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/18/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
2B/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d

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label	accession	host(s)	lab	country	taxonomic information
MUR/8/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
2C/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/7/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/2/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/9/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
3A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/1/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
1A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/d
MUR/5/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/17/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/10/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
MUR/6/2016	n/a	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/d
NEP/4/2016	n/a	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
SAU/2/2016	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/3/2016	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/7/2016	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
NEP/17/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/12/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/11/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/10/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/9/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/11/2016	n/a	goats	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/10/2016	n/a	goats	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/14/2016	n/a	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/5/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/19/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/28/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/6/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/17/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/13/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/12/2016	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
UAE/4/2016	n/a	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
UAE/2/2016	n/a	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
UAE/3/2016	n/a	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
UAE/5/2016	n/a	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
UAE/1/2016	n/a	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
SAU/1/2016	n/a	cattle	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/20/2015	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/18/2015	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/22/2015	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
SAU/19/2015	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
UAE/1/2015	n/a	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
SAU/10/2016	n/a	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/d
NEP/21/2012	KM921852	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/6/2012	KM921847	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/4/2012	KM921846	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
BHU/12/2012	KM921827	bovine	WRLFMD	Bhutan	ME-SA/Ind-2001/d
IND/129/2010*	KC506471	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND/149/2010*	KC506475	cattle	PD-FMD	India	ME-SA/Ind-2001/d
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
BHU/5/2009	KM921816	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
IND/86/2010*	KC506519	cattle	PD-FMD	India	ME-SA/Ind-2001/d
NEP/3/2009	KM921842	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/2/2009	HQ630694	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
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
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
IRN/88/2009	n/a	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/8/2005	n/a	ovine	WRLFMD	Iran	ME-SA/PanAsia-2

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label	accession	host(s)	lab	country	taxonomic information
IRN/18/2010	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
IRN/31/2009	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
TAI/189/87*	n/a	bovine	TRRL	Thailand	SEA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available