

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

## Genotyping Report

FMDV serotype: O  
Country: Mauritius  
Year: 2021  
Batch: WRLMEG/2021/00004  
No. of sequences: 2  
Report date: 26th March 2021  
Report generated by: Nick Knowles  
Report checked by: Jemma Wadsworth

This report has been prepared on behalf of the European Union Reference Laboratory (EURL), FAO Reference Centre & OIE Reference Laboratory for Foot-and-Mouth Disease chez Agence nationale de sécurité sanitaire – ANSES, Maisons-Alfort, Île-de-France, France and covers VP1 sequences submitted to the WRLFMD on 26/03/2021.



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

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Virus sample name:	MUR/21Z003409/21
Sender reference:	O/MUR/21Z003409/21
Location of origin:	Saint Gabriel, Rodriguez
Country of origin:	Mauritius
Date of collection:	10/03/2021
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	26/03/2021
Last updated:	26/03/2021
VIBASys IDs: sample 47668, genome 47669, sequence viba_47670, sequencing info 47671	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47674	MUR/21Z003410/21	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_41624	NEP/22/2018	cattle	96.5	0	O	ME-SA	Ind-2001	e
viba_36750	BHU/2/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_36754	BHU/3/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30254	MUR/23/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30258	MUR/24/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30028	F2/ROD/2016	bovine	96.4	0	O	ME-SA	Ind-2001	e
viba_47200	IND/IC214/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30250	MUR/22/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30024	F1/ROD/2016	bovine	96.4	0	O	ME-SA	Ind-2001	e

### Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30238	MUR/19/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	92.7	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.9	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	88.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009		88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_576	IND/R2/75		88.0	0	O	ME-SA		
viba_617	IND/53/79	bovine	87.8	0	O	ME-SA		

Virus sample name:	MUR/21Z003410/21
Sender reference:	O/MUR/21Z003410/21
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Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	26/03/2021
Last updated:	26/03/2021
VIBASys IDs: sample 47672, genome 47673, sequence viba_47674, sequencing info 47675	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_47670	MUR/21Z003409/21	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_41624	NEP/22/2018	cattle	96.5	0	O	ME-SA	Ind-2001	e
viba_36750	BHU/2/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_36754	BHU/3/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30254	MUR/23/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30258	MUR/24/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30028	F2/ROD/2016	bovine	96.4	0	O	ME-SA	Ind-2001	e
viba_47200	IND/IC214/2018	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30250	MUR/22/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_30024	F1/ROD/2016	bovine	96.4	0	O	ME-SA	Ind-2001	e

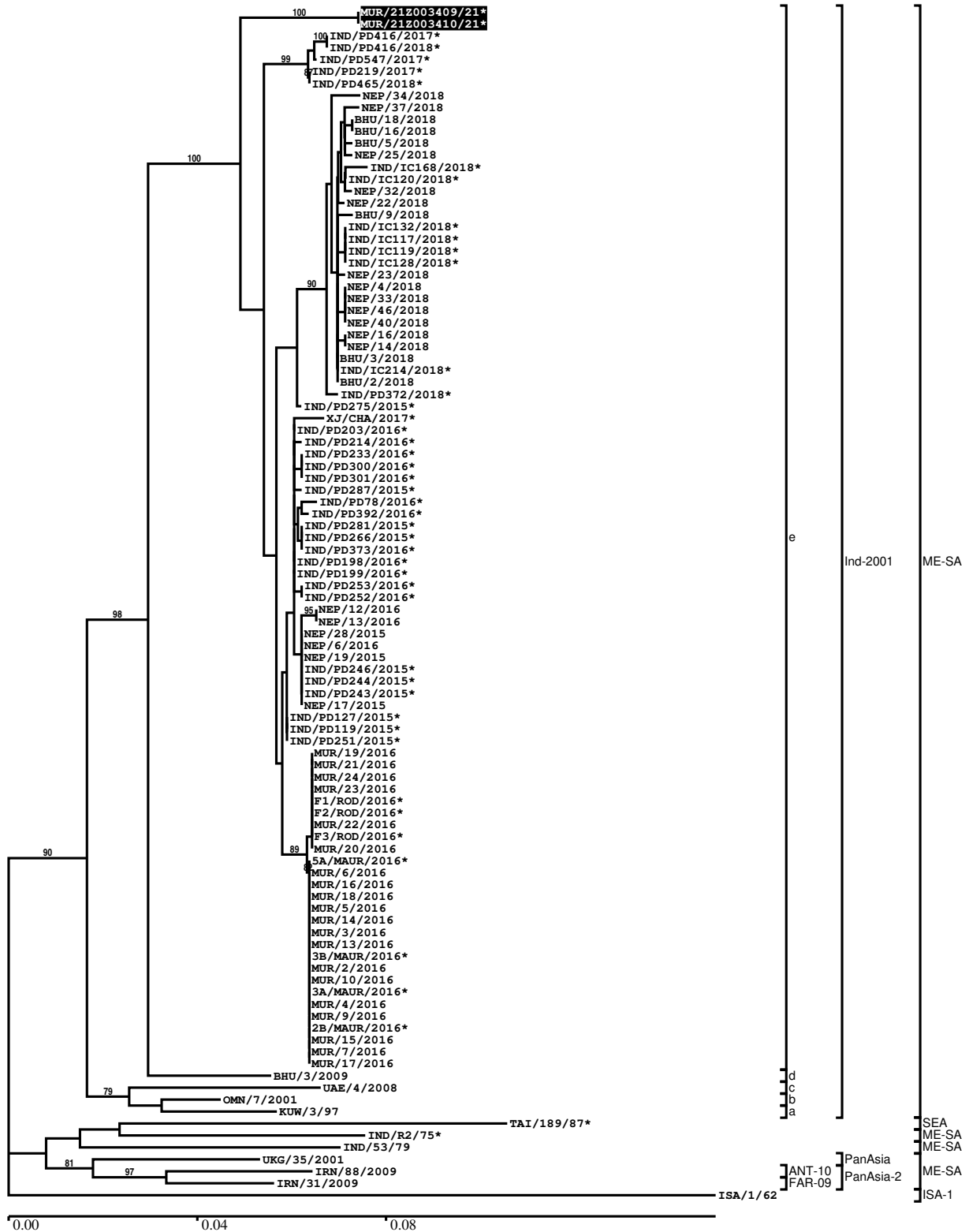
#### Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_30238	MUR/19/2016	cattle	96.4	0	O	ME-SA	Ind-2001	e
viba_293	BHU/3/2009	cattle	92.7	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	90.9	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	88.3	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_576	IND/R2/75		88.0	0	O	ME-SA		
viba_617	IND/53/79	bovine	87.8	0	O	ME-SA		

Report on FMDV O in Mauritius in 2021

Batch: WRLMEG/2021/00004



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2021/00004-Mauritius-O (2 sequences)
Sequence database set:	allseqs_O (5157 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
MUR/21Z003409/21*	n/a	cattle	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/21Z003410/21*	n/a	cattle	ANSES	Mauritius	ME-SA/Ind-2001/e
IND/PD416/2017*	MT918975	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD416/2018*	MT919012	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD547/2017*	MT918991	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD219/2017*	MT909762	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD465/2018*	MT919015	cattle	PD-FMD	India	ME-SA/Ind-2001/e
NEP/34/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/37/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BHU/18/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/16/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/5/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
NEP/25/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
IND/IC168/2018*	MT936107	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/IC120/2018*	MT936103	cattle	PD-FMD	India	ME-SA/Ind-2001/e
NEP/32/2018	n/a	porcine	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/22/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BHU/9/2018	n/a	goat	WRLFMD	Bhutan	ME-SA/Ind-2001/e
IND/IC132/2018*	MT936105	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/IC117/2018*	MT936101	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/IC119/2018*	MT936102	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/IC128/2018*	MT936104	cattle	PD-FMD	India	ME-SA/Ind-2001/e
NEP/23/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/4/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/33/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/46/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/40/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/16/2018	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/14/2018	MT276849	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BHU/3/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
IND/IC214/2018*	MT936112	cattle	PD-FMD	India	ME-SA/Ind-2001/e
BHU/2/2018	MT276847	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
IND/PD372/2018*	MT919006	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD275/2015*	MT909657	cattle	PD-FMD	India	ME-SA/Ind-2001/e
XJ/CHA/2017*	MF461724	cattle	LVRI	China	ME-SA/Ind-2001/e
IND/PD203/2016*	MT909674	cattle	PD-FMD	India	ME-SA/Ind-2001/e

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
IND/PD214/2016*	MT909675	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD233/2016*	MT909676	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD300/2016*	MT909687	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD301/2016*	MT909688	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD287/2015*	MT909659	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD78/2016*	MT909668	water buffalo	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD392/2016*	MT909703	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD281/2015*	MT909658	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD266/2015*	MT909655	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD373/2016*	MT909702	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD198/2016*	MT909672	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD199/2016*	MT909673	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD253/2016*	MT909681	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD252/2016*	MT909680	cattle	PD-FMD	India	ME-SA/Ind-2001/e
NEP/12/2016	MG972560	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/13/2016	MG972561	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/28/2015	KY449052	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/6/2016	KY449054	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/19/2015	KY449051	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
IND/PD246/2015*	MT909650	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD244/2015*	MT909649	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD243/2015*	MT909648	cattle	PD-FMD	India	ME-SA/Ind-2001/e
NEP/17/2015	KY449050	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
IND/PD127/2015*	MT909627	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD119/2015*	MT909624	cattle	PD-FMD	India	ME-SA/Ind-2001/e
IND/PD251/2015*	MT909652	cattle	PD-FMD	India	ME-SA/Ind-2001/e
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/21/2016	MG972512	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/24/2016	MG972515	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/23/2016	MG972514	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
F1/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
F2/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/22/2016	MG972513	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
F3/ROD/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/20/2016	MG972511	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
5A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/6/2016	MG972498	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/16/2016	MG972507	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/18/2016	MG972509	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/5/2016	MG972497	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/14/2016	MG972505	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/3/2016	MG972495	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/13/2016	MG972504	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
3B/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/2/2016	MG972494	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/10/2016	MG972502	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
3A/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/4/2016	MG972496	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/9/2016	MG972501	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
2B/MAUR/2016*	n/a	bovine	ANSES	Mauritius	ME-SA/Ind-2001/e
MUR/15/2016	MG972506	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/7/2016	MG972499	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/17/2016	MG972508	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	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
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
IND/R2/75*	AF204276	n/a	PD-FMD	India	ME-SA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

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