

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

## Genotyping Report

FMDV serotype: O  
Country: Sri Lanka  
Year: 2017, 2018  
Batch: WRLFMD/2018/00018  
No. of sequences: 9  
Report date: 18th June 2018  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska



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

email: [reporting@pirbright.ac.uk](mailto:reporting@pirbright.ac.uk)

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Virus sample name:	SRL/5/2017
Sender reference:	SL/AH/FMD/17-03
Location of origin:	Tellipalai, Jaffna, Northern
Country of origin:	Sri Lanka
Date of collection:	28/11/2017
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	13/06/2018
Last updated:	13/06/2018
VIBASys IDs: sample 36882, genome 36884, sequence viba_36885, sequencing info 36886	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36889	SRL/1/2018	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_31082	BAN/GKa-236(pig)/2015	porcine	98.3	0	O	ME-SA	Ind-2001	e
viba_26125	NEP/19/2015	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_29951	NEP/12/2016	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_31492	VIT/20/2016	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_23820	SAU/7/2016	bovine	98.1	0	O	ME-SA	Ind-2001	e
viba_29927	NEP/6/2016	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_31595	Zabaikalskiy/3/RUS/2016	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_29955	NEP/13/2016	cattle	98.1	0	O	ME-SA	Ind-2001	e
viba_31131	BAN/SI/Sh-234/2015	cattle	98.1	0	O	ME-SA	Ind-2001	e

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	94.0	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.3	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.3	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.5	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69		87.5	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	87.4	0	O	ME-SA	PanAsia-2	BAL-09
viba_617	IND/53/79	bovine	87.4	0	O	ME-SA		

Virus sample name:	SRL/1/2018
Sender reference:	SL/AH/FMD/18-01
Location of origin:	Sankanai, Jaffna, Northern
Country of origin:	Sri Lanka
Date of collection:	09/01/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	13/06/2018
Last updated:	13/06/2018

VIBASys IDs: sample 36887, genome 36888, sequence viba\_36889, sequencing info 36890

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36885	SRL/5/2017	cattle	99.8	0	O	ME-SA	Ind-2001	e
viba_31082	BAN/GKa-236(pig)/2015	porcine	98.1	0	O	ME-SA	Ind-2001	e
viba_26125	NEP/19/2015	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_29951	NEP/12/2016	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_31492	VIT/20/2016	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_23820	SAU/7/2016	bovine	97.9	0	O	ME-SA	Ind-2001	e
viba_29927	NEP/6/2016	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_31595	Zabaikalskiy/3/RUS/2016	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_29955	NEP/13/2016	cattle	97.9	0	O	ME-SA	Ind-2001	e
viba_31131	BAN/SI/Sh-234/2015	cattle	97.9	0	O	ME-SA	Ind-2001	e

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	93.8	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.1	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.0	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.1	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.4	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69		87.4	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	87.2	0	O	ME-SA	PanAsia-2	BAL-09
viba_617	IND/53/79	bovine	87.2	0	O	ME-SA		

Virus sample name:	SRL/2/2018
Sender reference:	SL/AH/FMD/18-13
Location of origin:	Thuppitiya, Badulla, Uva
Country of origin:	Sri Lanka
Date of collection:	06/02/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	13/06/2018
Last updated:	13/06/2018
VIBASys IDs: sample 36891, genome 36892, sequence viba_36893, sequencing info 36894	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36897	SRL/4/2018	cattle	99.8	0	O	ME-SA	Ind-2001	d
viba_36905	SRL/6/2018	cattle	99.5	0	O	ME-SA	Ind-2001	d
viba_36901	SRL/5/2018	cattle	99.5	0	O	ME-SA	Ind-2001	d
viba_36909	SRL/7/2018	cattle	99.1	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	98.7	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	98.4	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	95.6	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.6	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	92.1	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	89.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	88.4	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		88.1	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		88.1	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/4/2018
Sender reference:	SL/AH/FMD/18-05
Location of origin:	Ridimaliyadda, Badulla, Uva
Country of origin:	Sri Lanka
Date of collection:	15/02/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	08/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36895, genome 36896, sequence viba_36897, sequencing info 36898	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36893	SRL/2/2018	cattle	99.8	0	O	ME-SA	Ind-2001	d
viba_36905	SRL/6/2018	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_36901	SRL/5/2018	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_36909	SRL/7/2018	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	98.6	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.3	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.3	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.3	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	95.7	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.4	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		87.9	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		87.9	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/5/2018
Sender reference:	SL/AH/FMD/18-04
Location of origin:	Kanchankudi, Ampara, Eastern
Country of origin:	Sri Lanka
Date of collection:	14/03/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	06/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36899, genome 36900, sequence viba_36901, sequencing info 36902	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36905	SRL/6/2018	cattle	100.0	0	O	ME-SA	Ind-2001	d
viba_36897	SRL/4/2018	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_36893	SRL/2/2018	cattle	99.5	0	O	ME-SA	Ind-2001	d
viba_36909	SRL/7/2018	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	98.6	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	98.3	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	96.8	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	95.4	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.4	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		87.9	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		87.9	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/6/2018
Sender reference:	SL/AH/FMD/18-14
Location of origin:	Kanchankudi, Ampara, Eastern
Country of origin:	Sri Lanka
Date of collection:	14/03/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	06/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36903, genome 36904, sequence viba_36905, sequencing info 36906	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36901	SRL/5/2018	cattle	100.0	0	O	ME-SA	Ind-2001	d
viba_36897	SRL/4/2018	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_36893	SRL/2/2018	cattle	99.5	0	O	ME-SA	Ind-2001	d
viba_36909	SRL/7/2018	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	98.6	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	98.3	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	96.8	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	95.4	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.4	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_491	TUR/257/2008		87.9	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		87.9	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/7/2018
Sender reference:	SL/AH/FMD/18-06
Location of origin:	Ampara, Eastern
Country of origin:	Sri Lanka
Date of collection:	28/03/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	08/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36907, genome 36908, sequence viba_36909, sequencing info 36910	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36897	SRL/4/2018	cattle	99.2	0	O	ME-SA	Ind-2001	d
viba_36893	SRL/2/2018	cattle	99.1	0	O	ME-SA	Ind-2001	d
viba_36905	SRL/6/2018	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_36901	SRL/5/2018	cattle	98.9	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	98.1	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	97.8	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	96.4	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	94.9	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.6	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.9	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.0	0	O	ME-SA	PanAsia	
viba_491	TUR/257/2008		87.8	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	87.8	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		87.8	0	O	ME-SA	PanAsia-2	SAN-09



Virus sample name:	SRL/9/2018
Sender reference:	SL/AH/FMD/18-07
Location of origin:	Aluth oya, Polonnaruwa, North Central
Country of origin:	Sri Lanka
Date of collection:	16/04/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy2
Harvest date of material:	08/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36911, genome 36912, sequence viba_36913, sequencing info 36914	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35313	SRL/3/2017	cattle	99.1	0	O	ME-SA	Ind-2001	d
viba_23219	SRL/8/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23215	SRL/7/2014	bovine	96.4	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	96.4	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	96.4	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	96.4	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	96.4	0	O	ME-SA	Ind-2001	d
viba_23260	SRL/31/2014	water buffalo	96.2	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	96.2	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](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	92.1	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.9	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	89.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_860	IRN/6/2015	cattle	88.7	0	O	ME-SA	PanAsia-2	QOM-15
viba_285	UKG/35/2001	porcine	88.6	0	O	ME-SA	PanAsia	
viba_850	NEP/1/2015	cattle	88.2	1	O	ME-SA	PanAsia-2	KAT-15
viba_491	TUR/257/2008		88.1	0	O	ME-SA	PanAsia-2	TER-08

Virus sample name:	SRL/11/2018
Sender reference:	SL/AH/FMD/18-08
Location of origin:	Polonnaruwa, Polonnaruwa, North Central
Country of origin:	Sri Lanka
Date of collection:	23/04/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	06/06/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R; FMD-3161F/FMD-4303R
Received for sequencing:	14/06/2018
Created:	18/06/2018
Last updated:	18/06/2018
VIBASys IDs: sample 36915, genome 36916, sequence viba_36917, sequencing info 36918	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_23207	SRL/5/2014	bovine	96.8	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	96.8	0	O	ME-SA	Ind-2001	d
viba_35305	SRL/12/2016	cattle	96.8	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	96.8	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	96.7	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	96.5	0	O	ME-SA	Ind-2001	d

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_293	BHU/3/2009	cattle	95.4	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	92.1	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.3	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.7	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.2	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	87.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_491	TUR/257/2008		87.5	0	O	ME-SA	PanAsia-2	TER-08
viba_719	IRN/88/2009		87.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_505	TUR/264/2009		87.5	0	O	ME-SA	PanAsia-2	SAN-09

Report on FMDV O in Sri Lanka in 2017, 2018

Batch: WRLFMD/2018/00018



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2018/00018-Sri Lanka-O (9 sequences)
Sequence database set:	allseqs_O (3819 sequences)
Prototype sequence set:	!prototypes_O (48 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:	15
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
SRL/1/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/e
SRL/5/2017	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/e
NEP/10/2015	MG972543	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/7/2016	KY449055	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BAN/LK/Sa-248/2015*	KY077612	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
BAN/TG/Ba-268/2015*	KY077621	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
BAN/SI/Sh-234/2015*	KY077610	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
BAN/NL/Lo-245/2015*	KY077611	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
BHU/2/2016	MG972480	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
VIT/20/2016	MG972619	cattle	WRLFMD	Vietnam	ME-SA/Ind-2001/e
Zabaikalskiy/3/RUS/2016*	MG972584	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
170206/SKR/2017*	n/a	cattle	QIA	Republic of Korea (South Korea)	ME-SA/Ind-2001/e
Zabaikalskiy/2/RUS/2016*	MG972583	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
Zabaikalskiy/1/RUS/2016*	MG983720	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
BAN/GKa-236(pig)/2015*	KX712091	porcine	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
MYA/3/2016	MG972516	cattle	WRLFMD	Myanmar	ME-SA/Ind-2001/e
MYA12-2016 2*	n/a	n/a	TRRL	Myanmar	ME-SA/Ind-2001/e
NEP/13/2016	MG972561	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/12/2016	MG972560	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/5/2016	KY449053	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BHU/10/2016	MG972484	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
NEP/19/2015	KY449051	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/17/2015	KY449050	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/6/2016	KY449054	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/28/2015	KY449052	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/17/2016	MG972563	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
SAU/2/2016	MG972594	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/3/2016	MG972595	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/7/2016	MG972596	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SRL/11/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/7/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/4/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/2/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/5/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
SRL/6/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/12/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/11/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/4/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/5/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/6/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/9/2018	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/3/2017	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
IND139(302)/2013*	KJ825803	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND142(310)/2013*	KJ825801	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND141(306)/2013*	KJ825808	cattle	PD-FMD	India	ME-SA/Ind-2001/d
BAN/TA/Ma-200/2014*	KY077604	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
NEP/18/2013	KM921860	porcine	WRLFMD	Nepal	ME-SA/Ind-2001/d
IND571/2013*	KX228160	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND271/2013*	KX228161	cattle	PD-FMD	India	ME-SA/Ind-2001/d
UAE/1/2014	KM921877	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
BAN TA Dh-186 2013*	KJ175185	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
IND250(541)/2013*	KJ825809	water buffalo	PD-FMD	India	ME-SA/Ind-2001/d
IND205/2013*	KM264362	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND32/14*	KP822942	cattle	PD-FMD	India	ME-SA/Ind-2001/d
SRL/1/2013	MF947472	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
NEP/11/2013	KM921855	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
SRL/31/2014	MF947490	water buffalo	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/29/2014	MF947488	water buffalo	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/30/2014	MF947489	water buffalo	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/32/2014	MF947491	water buffalo	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/16/2014	MF947484	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/28/2014	MF947487	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/34/2014	MF947492	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/7/2014	MF947479	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/8/2014	MF947480	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/15/2014	MF947483	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
IND699/2013*	KP835578	indian elephant	PD-FMD	India	ME-SA/Ind-2001/d
SRL/3/2014	MF947476	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/11/2014	MF947482	porcine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/2/2014	MF947475	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/9/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/10/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/5/2014	MF947477	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/1/2014	MF947474	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/27/2014	MF947486	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/6/2014	MF947478	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/9/2014	MF947481	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/17/2014	MF947485	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
IND127/2013*	KM264359	cattle	PD-FMD	India	ME-SA/Ind-2001/d
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
NEP/1/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
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
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/6/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
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