

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

## Genotyping Report

FMDV serotype: O  
Country: Sri Lanka  
Year: 2015, 2016, 2017  
Batch: WRLFMD/2017/00030  
No. of sequences: 11  
Report date: 6th December 2017  
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/1/2015
Sender reference:	SL/AH/FMD/15-11
Location of origin:	Koolankulam, Vavuniya, Northern Province
Country of origin:	Sri Lanka
Date of collection:	15/12/2015
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 24/11/2017 & BTy2
Harvest date of material:	28/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35271, genome 35272, sequence viba_35273, sequencing info 35274	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_23199	SRL/2/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	98.6	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_31367	IND699/2013	indian elephant	98.4	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	95.1	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	89.7	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	89.0	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.9	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_719	IRN/88/2009		88.4	0	O	ME-SA	PanAsia-2	ANT-10
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

Virus sample name:	SRL/4/2016
Sender reference:	SL/AH/FMD/16-04
Location of origin:	Uhana, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	02/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35275, genome 35276, sequence viba_35277, sequencing info 35278	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35281	SRL/5/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_35285	SRL/6/2016	cattle	99.7	1	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.6	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.6	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	95.3	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	91.8	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	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		87.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_505	TUR/264/2009		87.6	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/5/2016
Sender reference:	SL/AH/FMD/16-05
Location of origin:	Bandaraduwa, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	02/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35279, genome 35280, sequence viba_35281, sequencing info 35282	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35285	SRL/6/2016	cattle	99.7	1	O	ME-SA	Ind-2001	d
viba_35277	SRL/4/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.6	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.6	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	95.3	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	91.8	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.3	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		88.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_505	TUR/264/2009		87.9	0	O	ME-SA	PanAsia-2	SAN-09
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	

Virus sample name:	SRL/6/2016
Sender reference:	SL/AH/FMD/16-06
Location of origin:	Bandaraduwa, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	02/06/2016
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	1
Material submitted for sequencing:	BTy1
Harvest date of material:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35283, genome 35284, sequence viba_35285, sequencing info 35286	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35281	SRL/5/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_35277	SRL/4/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.6	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.6	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	95.3	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	91.5	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	88.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	88.6	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	88.1	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		87.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_505	TUR/264/2009		87.8	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/7/2016
Sender reference:	SL/AH/FMD/16-07
Location of origin:	Seruwila, Trincomalee, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	14/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35287, genome 35288, sequence viba_35289, sequencing info 35290	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_23195	SRL/1/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23252	SRL/29/2014	water buffalo	97.9	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23264	SRL/32/2014	water buffalo	97.9	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23260	SRL/31/2014	water buffalo	97.9	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	94.8	0	O	ME-SA	Ind-2001	d
viba_705	KUW/3/97	bovine	92.9	0	O	ME-SA	Ind-2001	a
viba_541	OMN/7/2001	bovine	92.4	0	O	ME-SA	Ind-2001	b
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_285	UKG/35/2001	porcine	89.6	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	88.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_860	IRN/6/2015	cattle	88.0	0	O	ME-SA	PanAsia-2	QOM-15
viba_719	IRN/88/2009		87.8	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	SRL/9/2016
Sender reference:	SL/AH/FMD/16-15
Location of origin:	Aranthalawa, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	15/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35291, genome 35292, sequence viba_35293, sequencing info 35294	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35297	SRL/10/2016	cattle	100.0	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23199	SRL/2/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_31367	IND699/2013	indian elephant	98.6	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	95.3	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	91.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.3	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	89.1	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.5	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_505	TUR/264/2009		88.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_719	IRN/88/2009		87.8	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	SRL/10/2016
Sender reference:	SL/AH/FMD/16-16
Location of origin:	Tempane, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	15/06/2016
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	d
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 25/11/2017 & BTy2
Harvest date of material:	28/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35295, genome 35296, sequence viba_35297, sequencing info 35298	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35293	SRL/9/2016	cattle	100.0	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	98.9	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	98.7	0	O	ME-SA	Ind-2001	d
viba_23199	SRL/2/2014	bovine	98.6	0	O	ME-SA	Ind-2001	d
viba_31367	IND699/2013	indian elephant	98.6	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	95.3	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	91.2	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	89.3	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	89.1	0	O	ME-SA	PanAsia-2	FAR-09
viba_491	TUR/257/2008		88.5	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	88.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_505	TUR/264/2009		88.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_719	IRN/88/2009		87.8	0	O	ME-SA	PanAsia-2	ANT-10



Virus sample name:	SRL/11/2016
Sender reference:	SL/AH/FMD/16-08
Location of origin:	Aranthalawa, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	16/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35299, genome 35300, sequence viba_35301, sequencing info 35302	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35305	SRL/12/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	97.8	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.6	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.6	0	O	ME-SA	Ind-2001	d
viba_23199	SRL/2/2014	bovine	97.5	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	95.6	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	92.1	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	89.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.8	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	88.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_491	TUR/257/2008		88.2	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	88.2	0	O	ME-SA	PanAsia-2	
viba_505	TUR/264/2009		87.9	0	O	ME-SA	PanAsia-2	SAN-09

Virus sample name:	SRL/12/2016
Sender reference:	SL/AH/FMD/16-09
Location of origin:	Mahaoya, Ampara, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	16/06/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35303, genome 35304, sequence viba_35305, sequencing info 35306	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35301	SRL/11/2016	cattle	99.7	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	98.1	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.9	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.9	0	O	ME-SA	Ind-2001	d
viba_23199	SRL/2/2014	bovine	97.8	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	95.9	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	92.4	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	89.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_666	IRN/18/2010	cattle	89.1	0	O	ME-SA	PanAsia-2	BAL-09
viba_491	TUR/257/2008		88.6	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	88.6	0	O	ME-SA	PanAsia-2	
viba_354	PAK/16/2010	cattle	88.3	0	O	ME-SA	PanAsia-2	PUN-10

Virus sample name:	SRL/15/2016
Sender reference:	SL/AH/FMD/16-13
Location of origin:	Badalgama, Gampaha, Western Province
Country of origin:	Sri Lanka
Date of collection:	26/12/2016
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35307, genome 35308, sequence viba_35309, sequencing info 35310	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35305	SRL/12/2016	cattle	97.0	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	96.8	0	O	ME-SA	Ind-2001	d
viba_23195	SRL/1/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_35301	SRL/11/2016	cattle	96.7	0	O	ME-SA	Ind-2001	d
viba_23211	SRL/6/2014	bovine	96.7	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	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_23203	SRL/3/2014	bovine	96.5	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	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	94.3	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	91.9	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	89.6	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		88.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_491	TUR/257/2008		87.9	0	O	ME-SA	PanAsia-2	TER-08
viba_650	IRN/8/2005	ovine	87.9	0	O	ME-SA	PanAsia-2	

Virus sample name:	SRL/3/2017
Sender reference:	SL/AH/FMD/17-02
Location of origin:	Batticaloa, Eastern Province
Country of origin:	Sri Lanka
Date of collection:	08/09/2017
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:	24/11/2017
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/12/2017
Created:	06/12/2017
Last updated:	06/12/2017
VIBASys IDs: sample 35311, genome 35312, sequence viba_35313, sequencing info 35314	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_23195	SRL/1/2014	bovine	97.3	0	O	ME-SA	Ind-2001	d
viba_23207	SRL/5/2014	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_35305	SRL/12/2016	cattle	97.3	0	O	ME-SA	Ind-2001	d
viba_23227	SRL/11/2014	porcine	97.2	0	O	ME-SA	Ind-2001	d
viba_23223	SRL/9/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23231	SRL/15/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23203	SRL/3/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23239	SRL/17/2014	bovine	97.2	0	O	ME-SA	Ind-2001	d
viba_23199	SRL/2/2014	bovine	97.0	0	O	ME-SA	Ind-2001	d

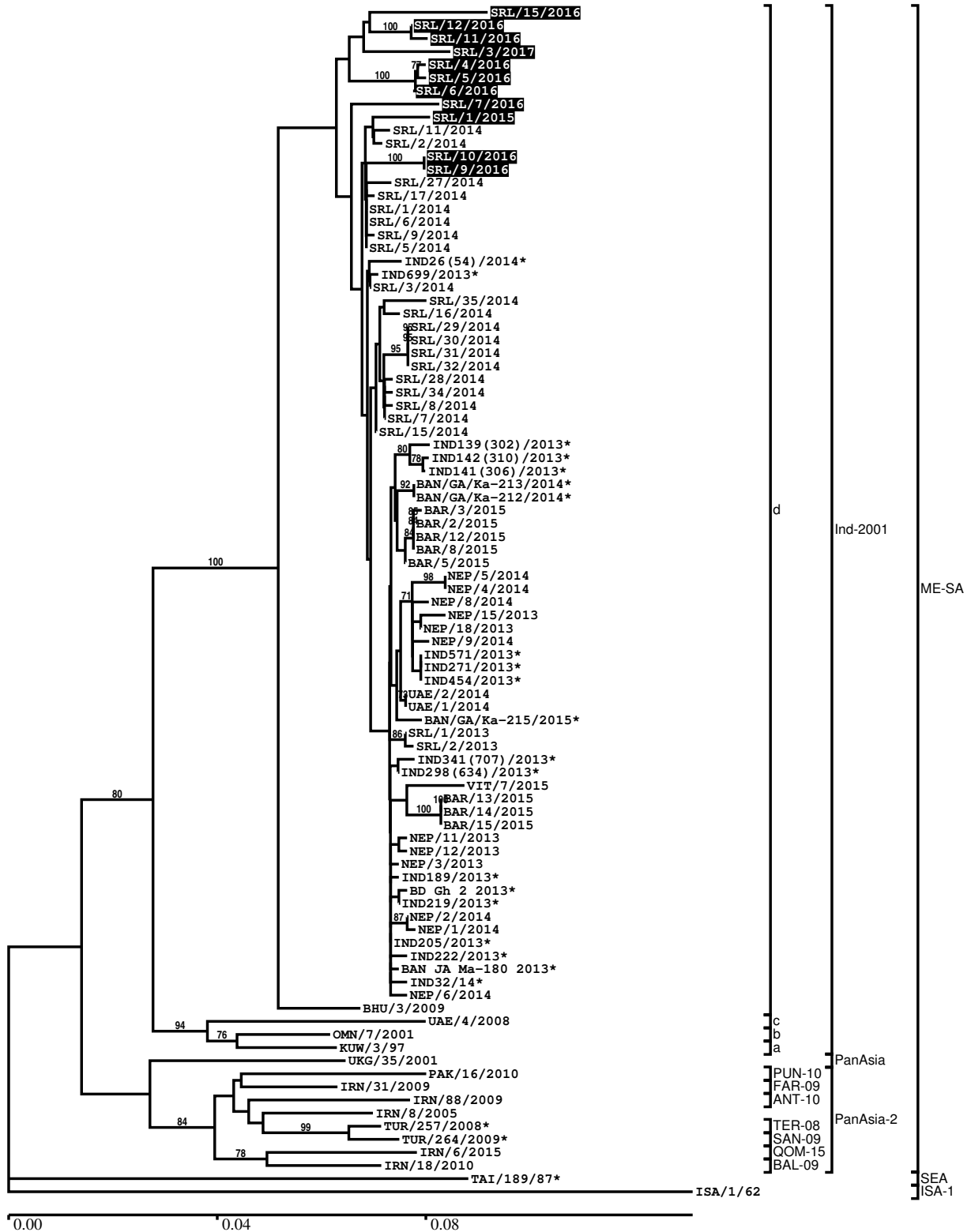
#### Most Closely Related Prototype Sequences

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	94.8	0	O	ME-SA	Ind-2001	d
viba_705	KUW/3/97	bovine	92.6	0	O	ME-SA	Ind-2001	a
viba_541	OMN/7/2001	bovine	92.4	0	O	ME-SA	Ind-2001	b
viba_397	UAE/4/2008	gazelle	91.0	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	89.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_666	IRN/18/2010	cattle	89.4	0	O	ME-SA	PanAsia-2	BAL-09
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	88.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_491	TUR/257/2008		88.6	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	88.6	0	O	ME-SA	PanAsia-2	PUN-10

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Batch: WRLFMD/2017/00030



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor: vp1\_O  
 Query sequence set: WRLFMD/2017/00030-Sri Lanka-O (11 sequences)  
 Sequence database set: allseqs\_O (3649 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: 13  
 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/15/2016	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/3/2017	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/7/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/1/2015	n/a	cattle	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/10/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/9/2016	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/27/2014	MF947486	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/17/2014	MF947485	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/1/2014	MF947474	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/5/2014	MF947477	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
IND26(54)/2014*	KJ825807	cattle	PD-FMD	India	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/35/2014	MF947493	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/16/2014	MF947484	bovine	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/31/2014	MF947490	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/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/8/2014	MF947480	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/7/2014	MF947479	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/15/2014	MF947483	bovine	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

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
BAN/GA/Ka-213/2014*	KY077606	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
BAN/GA/Ka-212/2014*	KY077605	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
BAR/3/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/2/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/12/2015	n/a	sheep	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/8/2015	n/a	sheep	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/5/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
NEP/5/2014	KM921864	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/4/2014	KM921863	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/8/2014	KM921867	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/15/2013	KM921857	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/18/2013	KM921860	porcine	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/9/2014	KM921868	cattle	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
IND454/2013*	KX228159	cattle	PD-FMD	India	ME-SA/Ind-2001/d
UAE/2/2014	KM921878	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
UAE/1/2014	KM921877	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/d
BAN/GA/Ka-215/2015*	KY077607	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
SRL/1/2013	MF947472	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
SRL/2/2013	MF947473	bovine	WRLFMD	Sri Lanka	ME-SA/Ind-2001/d
IND341(707)/2013*	KJ825805	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND298(634)/2013*	KJ825804	cattle	PD-FMD	India	ME-SA/Ind-2001/d
VIT/7/2015	n/a	porcine	WRLFMD	Vietnam	ME-SA/Ind-2001/d
BAR/13/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/14/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
BAR/15/2015	n/a	cattle	WRLFMD	Bahrain	ME-SA/Ind-2001/d
NEP/11/2013	KM921855	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/12/2013	KM921856	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/3/2013	KM921853	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
IND189/2013*	KM264361	cattle	PD-FMD	India	ME-SA/Ind-2001/d
BD Gh 2 2013*	KT037119	cattle	Bangladesh Agri Univ	Bangladesh	ME-SA/Ind-2001/d
IND219/2013*	KM264363	cattle	PD-FMD	India	ME-SA/Ind-2001/d
NEP/2/2014	KM921862	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
NEP/1/2014	KM921861	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/d
IND205/2013*	KM264362	cattle	PD-FMD	India	ME-SA/Ind-2001/d
IND222/2013*	KM264364	cattle	PD-FMD	India	ME-SA/Ind-2001/d
BAN JA Ma-180 2013*	KJ175183	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/d
IND32/14*	KP822942	cattle	PD-FMD	India	ME-SA/Ind-2001/d
NEP/6/2014	KM921865	cattle	WRLFMD	Nepal	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
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
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/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
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