

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

## Genotyping Report

FMDV serotype: O  
Country: Bhutan  
Year: 2017, 2018  
Batch: WRLFMD/2018/00017  
No. of sequences: 4  
Report date: 11th June 2018  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska



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Virus sample name:	BHU/24/2017
Sender reference:	508-2
Location of origin:	Bangtaygang, Bongo, Chukha, RLDC, Tshimasham, Western
Country of origin:	Bhutan
Date of collection:	19/07/2017
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:	22/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	11/06/2018
Last updated:	11/06/2018

VIBASys IDs: sample 36739, genome 36741, sequence viba\_36742, sequencing info 36743

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36746	BHU/25/2017	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_34353	BHU/16/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34373	BHU/21/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34357	BHU/17/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34349	BHU/15/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34377	BHU/22/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34329	BHU/8/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34142	NEP/22/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34333	BHU/11/2017	cattle	99.1	0	O	ME-SA	Ind-2001	e
viba_34361	BHU/18/2017	cattle	98.9	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	92.6	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.9	0	O	ME-SA	Ind-2001	b
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_705	KUW/3/97	bovine	90.2	0	O	ME-SA	Ind-2001	a
viba_719	IRN/88/2009		87.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_285	UKG/35/2001	porcine	86.9	0	O	ME-SA	PanAsia	
viba_359	Manisa/TUR/69		86.9	0	O	ME-SA		
viba_766	IRN/31/2009	cattle	86.9	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	86.8	0	O	ME-SA	PanAsia-2	
viba_116	SUD/2/86	bovine	86.6	0	O	EA-3		

Virus sample name:	BHU/25/2017
Sender reference:	508-3
Location of origin:	Bangtaygang, Bongo, Chukha, RLDC, Tshimasham, Western
Country of origin:	Bhutan
Date of collection:	19/07/2017
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	Ind-2001
Sublineage:	e
Sequence length:	633
Ambiguities:	0
Material submitted for sequencing:	BTy1 22/05/2018 & BTy2
Harvest date of material:	24/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	11/06/2018
Last updated:	11/06/2018

VIBASys IDs: sample 36744, genome 36745, sequence viba\_36746, sequencing info 36747

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36742	BHU/24/2017	cattle	99.7	0	O	ME-SA	Ind-2001	e
viba_34353	BHU/16/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34373	BHU/21/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34357	BHU/17/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34349	BHU/15/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34377	BHU/22/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34329	BHU/8/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34333	BHU/11/2017	cattle	99.4	0	O	ME-SA	Ind-2001	e
viba_34361	BHU/18/2017	cattle	99.2	0	O	ME-SA	Ind-2001	e
viba_34369	BHU/20/2017	cattle	99.2	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	92.6	0	O	ME-SA	Ind-2001	d
viba_541	OMN/7/2001	bovine	90.9	0	O	ME-SA	Ind-2001	b
viba_397	UAE/4/2008	gazelle	90.2	0	O	ME-SA	Ind-2001	c
viba_705	KUW/3/97	bovine	90.2	0	O	ME-SA	Ind-2001	a
viba_719	IRN/88/2009		87.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_285	UKG/35/2001	porcine	87.2	0	O	ME-SA	PanAsia	
viba_766	IRN/31/2009	cattle	87.2	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	87.1	0	O	ME-SA	PanAsia-2	
viba_359	Manisa/TUR/69		86.9	0	O	ME-SA		
viba_617	IND/53/79	bovine	86.6	0	O	ME-SA		

Virus sample name:	BHU/2/2018
Sender reference:	1026-1
Location of origin:	Malbashy, Samphelling, Chukha, RLDC, Tshimasham, Western
Country of origin:	Bhutan
Date of collection:	20/04/2018
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:	22/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	11/06/2018
Last updated:	11/06/2018
VIBASys IDs: sample 36748, genome 36749, sequence viba_36750, sequencing info 36751	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36754	BHU/3/2018	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_25914	UAE/1/2015	gazelle	98.9	0	O	ME-SA	Ind-2001	e
viba_23824	SAU/10/2016	bovine	98.9	0	O	ME-SA	Ind-2001	e
viba_26248	SAU/20/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_26240	SAU/18/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_26244	SAU/19/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_23808	SAU/1/2016	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_26252	SAU/22/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_35878	SAU/17/2016	cattle	98.4	0	O	ME-SA	Ind-2001	e
viba_35914	JOR/1/2017	sheep	98.4	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	92.6	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.4	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.3	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		88.2	0	O	ME-SA		
viba_617	IND/53/79	bovine	87.8	0	O	ME-SA		
viba_860	IRN/6/2015	cattle	87.8	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	BHU/3/2018
Sender reference:	1026-2
Location of origin:	Malbashy, Samphelling, Chukha, RLDC, Tshimasham, Western
Country of origin:	Bhutan
Date of collection:	20/04/2018
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:	22/05/2018
Primers:	O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	11/06/2018
Last updated:	11/06/2018

VIBASys IDs: sample 36752, genome 36753, sequence viba\_36754, sequencing info 36755

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36750	BHU/2/2018	cattle	100.0	0	O	ME-SA	Ind-2001	e
viba_25914	UAE/1/2015	gazelle	98.9	0	O	ME-SA	Ind-2001	e
viba_23824	SAU/10/2016	bovine	98.9	0	O	ME-SA	Ind-2001	e
viba_26248	SAU/20/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_26240	SAU/18/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_26244	SAU/19/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_23808	SAU/1/2016	cattle	98.7	0	O	ME-SA	Ind-2001	e
viba_26252	SAU/22/2015	bovine	98.7	0	O	ME-SA	Ind-2001	e
viba_35878	SAU/17/2016	cattle	98.4	0	O	ME-SA	Ind-2001	e
viba_35914	JOR/1/2017	sheep	98.4	0	O	ME-SA	Ind-2001	e

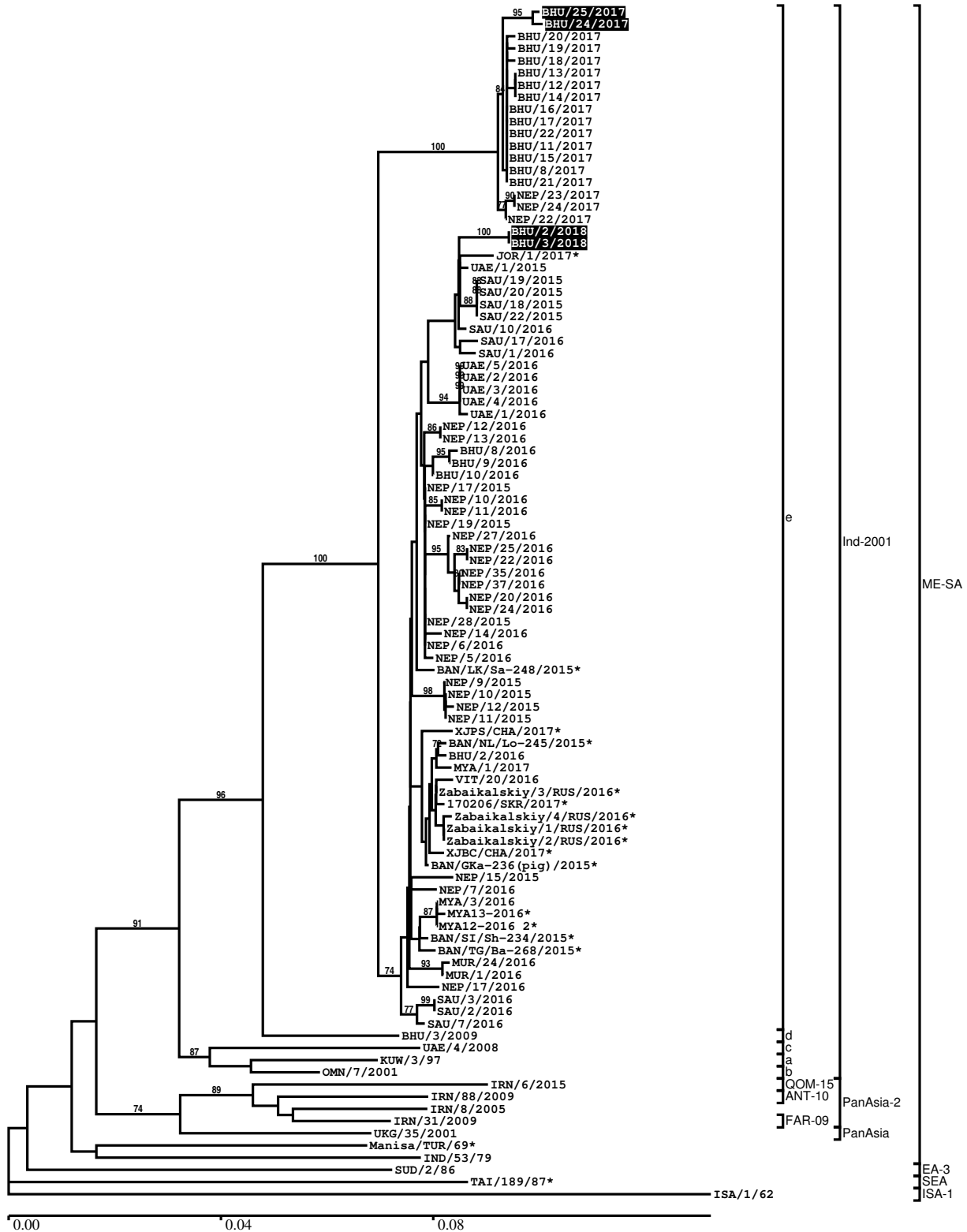
#### Most Closely Related Prototype Sequences

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	92.6	0	O	ME-SA	Ind-2001	b
viba_705	KUW/3/97	bovine	91.4	0	O	ME-SA	Ind-2001	a
viba_397	UAE/4/2008	gazelle	90.3	0	O	ME-SA	Ind-2001	c
viba_766	IRN/31/2009	cattle	88.6	0	O	ME-SA	PanAsia-2	FAR-09
viba_285	UKG/35/2001	porcine	88.5	0	O	ME-SA	PanAsia	
viba_719	IRN/88/2009		88.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_359	Manisa/TUR/69		88.2	0	O	ME-SA		
viba_617	IND/53/79	bovine	87.8	0	O	ME-SA		
viba_860	IRN/6/2015	cattle	87.8	0	O	ME-SA	PanAsia-2	QOM-15

Report on FMDV O in Bhutan in 2017, 2018

Batch: WRLFMD/2018/00017



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLFMD/2018/00017-Bhutan-O (4 sequences)
Sequence database set:	allseqs_O (3794 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:	12
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
BHU/25/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/24/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/20/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/19/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/18/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/13/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/12/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/14/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/16/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/17/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/22/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/11/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/15/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/8/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/21/2017	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
NEP/23/2017	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/24/2017	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/22/2017	n/a	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BHU/2/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/3/2018	n/a	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
JOR/1/2017*	MH053353	sheep	JUST	Jordan	ME-SA/Ind-2001/e
UAE/1/2015	MG972605	gazelle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/e
SAU/19/2015	MG972590	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/20/2015	MG972591	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/18/2015	MG972589	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/22/2015	MG972592	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/10/2016	MG972597	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/17/2016	MG972598	cattle	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/1/2016	MG972593	cattle	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
UAE/5/2016	MG972610	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/e
UAE/2/2016	MG972607	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/e
UAE/3/2016	MG972608	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/e

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
UAE/4/2016	MG972609	cattle	WRLFMD	United Arab Emirates	ME-SA/Ind-2001/e
UAE/1/2016	MG972606	cattle	WRLFMD	United Arab Emirates	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
BHU/8/2016	MG972482	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/9/2016	MG972483	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
BHU/10/2016	MG972484	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/e
NEP/17/2015	KY449050	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/10/2016	MG972558	goats	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/11/2016	MG972559	goats	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/19/2015	KY449051	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/27/2016	MG972569	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/25/2016	MG972568	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/22/2016	MG972565	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/35/2016	MG972577	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/37/2016	MG972579	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/20/2016	MG972564	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/24/2016	MG972567	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/28/2015	KY449052	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/14/2016	MG972562	water buffalo	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/6/2016	KY449054	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/5/2016	KY449053	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
BAN/LK/Sa-248/2015*	KY077612	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
NEP/9/2015	MG972542	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/10/2015	MG972543	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/12/2015	MG972545	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/11/2015	MG972544	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
XJPS/CHA/2017*	KY696707	n/a	LVRI	China	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
MYA/1/2017	MG972517	cattle	WRLFMD	Myanmar	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/4/RUS/2016*	MG972585	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
Zabaikalskiy/1/RUS/2016*	MG983720	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
Zabaikalskiy/2/RUS/2016*	MG972583	cattle	ARRIAH	Russia	ME-SA/Ind-2001/e
XJBC/CHA/2017*	KY696708	n/a	LVRI	China	ME-SA/Ind-2001/e
BAN/GKa-236(pig)/2015*	KX712091	porcine	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
NEP/15/2015	MG972547	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
NEP/7/2016	KY449055	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
MYA/3/2016	MG972516	cattle	WRLFMD	Myanmar	ME-SA/Ind-2001/e
MYA13-2016*	n/a	n/a	TRRL	Myanmar	ME-SA/Ind-2001/e
MYA12-2016 2*	n/a	n/a	TRRL	Myanmar	ME-SA/Ind-2001/e
BAN/SI/Sh-234/2015*	KY077610	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
BAN/TG/Ba-268/2015*	KY077621	cattle	Univ Dhaka	Bangladesh	ME-SA/Ind-2001/e
MUR/24/2016	MG972515	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
MUR/1/2016	MG972493	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
NEP/17/2016	MG972563	cattle	WRLFMD	Nepal	ME-SA/Ind-2001/e
SAU/3/2016	MG972595	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/2/2016	MG972594	bovine	WRLFMD	Saudi Arabia	ME-SA/Ind-2001/e
SAU/7/2016	MG972596	bovine	WRLFMD	Saudi Arabia	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
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
IRN/6/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-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
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia

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label	accession	host(s)	lab	country	taxonomic information
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
SUD/2/86	DQ165075	bovine	WRLFMD	Sudan	EA-3
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