

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

Genotyping Report

FMDV serotype: O
Country: Russia
Year: 2018, 2019
Batch: WRLMEG/2019/00019
No. of sequences: 6
Report date: 27th February 2019
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth

This report is prepared on behalf of the FGBI “ARRIAH” (Russian Federation) and covers VP1 sequences submitted to the WRLFMD on 27/02/2019.



Copyright ©2019 The Pirbright Institute, Ash Road, Pirbright, Woking GU24 0NF, United Kingdom.

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

email: reporting@pirbright.ac.uk

The contents of this report should not be reproduced without permission.

Virus sample name:	Zabaikalskiy/1/RUS/2018
Sender reference:	O/Zabaikalskiy/1/RUS/2018
Location of origin:	Chindantskoe, Borzinskiy raion, Zabaikalskiy krai
Country of origin:	Russia
Date of collection:	07/02/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40178, genome 40181, sequence viba_40182, sequencing info 40183	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40186	Zabaikalskiy/2/RUS/2018	cattle	100.0	0	O	ME-SA	PanAsia	
viba_40190	Zabaikalskiy/3/RUS/2018	cattle	99.8	0	O	ME-SA	PanAsia	
viba_37336	MOG/8/2018	cattle	99.7	0	O	ME-SA	PanAsia	
viba_33570	MOG/10/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33554	MOG/6/2017	gazelle	98.6	0	O	ME-SA	PanAsia	
viba_33550	MOG/5/2017	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33546	MOG/3/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33542	MOG/2/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33562	MOG/8/2017	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33558	MOG/7/2017	gazelle	98.6	0	O	ME-SA	PanAsia	

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_285	UKG/35/2001	porcine	92.7	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	90.8	0	O	ME-SA	Ind-2001	a
viba_650	IRN/8/2005	ovine	90.5	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	90.5	0	O	ME-SA	Ind-2001	d
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_860	IRN/6/2015	cattle	89.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	89.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_541	OMN/7/2001	bovine	89.6	0	O	ME-SA	Ind-2001	b
viba_719	IRN/88/2009		89.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_30238	MUR/19/2016	cattle	89.6	0	O	ME-SA	Ind-2001	e

Virus sample name:	Zabaikalskiy/2/RUS/2018
Sender reference:	O/Zabaikalskiy/2/RUS/2018
Location of origin:	Novoborzinskoe, Borzinskiy raion, Zabaikalskiy krai
Country of origin:	Russia
Date of collection:	09/02/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40184, genome 40185, sequence viba_40186, sequencing info 40187	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40182	Zabaikalskiy/1/RUS/2018	cattle	100.0	0	O	ME-SA	PanAsia	
viba_40190	Zabaikalskiy/3/RUS/2018	cattle	99.8	0	O	ME-SA	PanAsia	
viba_37336	MOG/8/2018	cattle	99.7	0	O	ME-SA	PanAsia	
viba_33570	MOG/10/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33554	MOG/6/2017	gazelle	98.6	0	O	ME-SA	PanAsia	
viba_33550	MOG/5/2017	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33546	MOG/3/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33542	MOG/2/2017a	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33562	MOG/8/2017	cattle	98.6	0	O	ME-SA	PanAsia	
viba_33558	MOG/7/2017	gazelle	98.6	0	O	ME-SA	PanAsia	

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_285	UKG/35/2001	porcine	92.7	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	90.8	0	O	ME-SA	Ind-2001	a
viba_650	IRN/8/2005	ovine	90.5	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	90.5	0	O	ME-SA	Ind-2001	d
viba_766	IRN/31/2009	cattle	90.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_860	IRN/6/2015	cattle	89.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	89.9	0	O	ME-SA	PanAsia-2	BAL-09
viba_541	OMN/7/2001	bovine	89.6	0	O	ME-SA	Ind-2001	b
viba_719	IRN/88/2009		89.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_30238	MUR/19/2016	cattle	89.6	0	O	ME-SA	Ind-2001	e

Virus sample name:	Zabaikalskiy/3/RUS/2018
Sender reference:	O/Zabaikalskiy/3/RUS/2018
Location of origin:	Solovfevskoe, Borzinskiy raion, Zabaikalskiy krai
Country of origin:	Russia
Date of collection:	09/02/2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40188, genome 40189, sequence viba_40190, sequencing info 40191	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40182	Zabaikalskiy/1/RUS/2018	cattle	99.8	0	O	ME-SA	PanAsia	
viba_40186	Zabaikalskiy/2/RUS/2018	cattle	99.8	0	O	ME-SA	PanAsia	
viba_37336	MOG/8/2018	cattle	99.5	0	O	ME-SA	PanAsia	
viba_33570	MOG/10/2017a	cattle	98.7	0	O	ME-SA	PanAsia	
viba_33554	MOG/6/2017	gazelle	98.7	0	O	ME-SA	PanAsia	
viba_33550	MOG/5/2017	cattle	98.7	0	O	ME-SA	PanAsia	
viba_33546	MOG/3/2017a	cattle	98.7	0	O	ME-SA	PanAsia	
viba_33542	MOG/2/2017a	cattle	98.7	0	O	ME-SA	PanAsia	
viba_33562	MOG/8/2017	cattle	98.7	0	O	ME-SA	PanAsia	
viba_33558	MOG/7/2017	gazelle	98.7	0	O	ME-SA	PanAsia	

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_285	UKG/35/2001	porcine	92.6	0	O	ME-SA	PanAsia	
viba_705	KUW/3/97	bovine	91.0	0	O	ME-SA	Ind-2001	a
viba_650	IRN/8/2005	ovine	90.7	0	O	ME-SA	PanAsia-2	
viba_293	BHU/3/2009	cattle	90.7	0	O	ME-SA	Ind-2001	d
viba_766	IRN/31/2009	cattle	90.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_860	IRN/6/2015	cattle	90.1	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_30238	MUR/19/2016	cattle	89.8	0	O	ME-SA	Ind-2001	e
viba_541	OMN/7/2001	bovine	89.7	0	O	ME-SA	Ind-2001	b
viba_719	IRN/88/2009		89.7	0	O	ME-SA	PanAsia-2	ANT-10

Virus sample name:	Primorskiy/RUS/1/2019
Sender reference:	O/Primorskiy/RUS/1/2019
Location of origin:	RusAgro, Grigorfevka, Mihailovskiy raion, Primorskiy krai
Country of origin:	Russia
Date of collection:	09/01/2019
Host species:	porcine
Serotype:	O
Topotype:	SEA
Lineage:	Mya-98
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40192, genome 40193, sequence viba_40194, sequencing info 40195	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40198	Primorskiy/RUS/2/2019	porcine	99.4	0	O	SEA	Mya-98	
viba_40202	Primorskiy/RUS/3/2019	porcine	99.1	0	O	SEA	Mya-98	
viba_23141	Primorskiy/RUS/2014	porcine	95.1	0	O	SEA	Mya-98	
viba_37715	VN 18-27160	porcine	95.1	0	O	SEA	Mya-98	
viba_23173	SKR/14/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23177	SKR/16/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23181	SKR/18/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23191	JC/CB/ROK	porcine	94.6	0	O	SEA	Mya-98	
viba_23169	SKR/12/2014	porcine	94.5	0	O	SEA	Mya-98	
viba_23164	SKR/6/2014	porcine	94.0	0	O	SEA	Mya-98	

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_199	MYA/7/98	bovine	90.5	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	86.4	0	O	SEA		
viba_576	IND/R2/75		83.8	0	O	ME-SA		
viba_850	NEP/1/2015	cattle	83.3	1	O	ME-SA	PanAsia-2	KAT-15
viba_359	Manisa/TUR/69		83.2	0	O	ME-SA		
viba_694	CAM/3/98	bovine	83.1	0	O	SEA	Cam-94	
viba_491	TUR/257/2008		83.1	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		83.1	0	O	ME-SA	PanAsia-2	SAN-09
viba_650	IRN/8/2005	ovine	83.0	0	O	ME-SA	PanAsia-2	
viba_666	IRN/18/2010	cattle	83.0	0	O	ME-SA	PanAsia-2	BAL-09

Virus sample name:	Primorskiy/RUS/2/2019
Sender reference:	O/Primorskiy/RUS/2/2019
Location of origin:	Merci-Treid, Prohory, Spasskiy raion, Primorskiy krai
Country of origin:	Russia
Date of collection:	16/01/2019
Host species:	porcine
Serotype:	O
Topotype:	SEA
Lineage:	Mya-98
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40196, genome 40197, sequence viba_40198, sequencing info 40199	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40202	Primorskiy/RUS/3/2019	porcine	99.7	0	O	SEA	Mya-98	
viba_40194	Primorskiy/RUS/1/2019	porcine	99.4	0	O	SEA	Mya-98	
viba_23141	Primorskiy/RUS/2014	porcine	95.4	0	O	SEA	Mya-98	
viba_37715	VN 18-27160	porcine	95.4	0	O	SEA	Mya-98	
viba_23173	SKR/14/2014	porcine	94.9	0	O	SEA	Mya-98	
viba_23177	SKR/16/2014	porcine	94.9	0	O	SEA	Mya-98	
viba_23181	SKR/18/2014	porcine	94.9	0	O	SEA	Mya-98	
viba_23191	JC/CB/ROK	porcine	94.9	0	O	SEA	Mya-98	
viba_23169	SKR/12/2014	porcine	94.8	0	O	SEA	Mya-98	
viba_23164	SKR/6/2014	porcine	94.3	0	O	SEA	Mya-98	

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_199	MYA/7/98	bovine	90.5	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	86.7	0	O	SEA		
viba_576	IND/R2/75		84.3	0	O	ME-SA		
viba_694	CAM/3/98	bovine	83.7	0	O	SEA	Cam-94	
viba_359	Manisa/TUR/69		83.7	0	O	ME-SA		
viba_666	IRN/18/2010	cattle	83.5	0	O	ME-SA	PanAsia-2	BAL-09
viba_850	NEP/1/2015	cattle	83.4	1	O	ME-SA	PanAsia-2	KAT-15
viba_491	TUR/257/2008		83.3	0	O	ME-SA	PanAsia-2	TER-08
viba_505	TUR/264/2009		83.3	0	O	ME-SA	PanAsia-2	SAN-09
viba_860	IRN/6/2015	cattle	83.2	0	O	ME-SA	PanAsia-2	QOM-15

Virus sample name:	Primorskiy/RUS/3/2019
Sender reference:	O/Primorskiy/RUS/3/2019
Location of origin:	Primorskiy Becon, Prohory, Spasskiy raion, Primorskiy krai
Country of origin:	Russia
Date of collection:	22/01/2019
Host species:	porcine
Serotype:	O
Topotype:	SEA
Lineage:	Mya-98
Sublineage:	
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:	27/02/2019
Last updated:	27/02/2019
VIBASys IDs: sample 40200, genome 40201, sequence viba_40202, sequencing info 40203	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40198	Primorskiy/RUS/2/2019	porcine	99.7	0	O	SEA	Mya-98	
viba_40194	Primorskiy/RUS/1/2019	porcine	99.1	0	O	SEA	Mya-98	
viba_37715	VN 18-27160	porcine	95.4	0	O	SEA	Mya-98	
viba_23141	Primorskiy/RUS/2014	porcine	95.3	0	O	SEA	Mya-98	
viba_23173	SKR/14/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23177	SKR/16/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23181	SKR/18/2014	porcine	94.6	0	O	SEA	Mya-98	
viba_23191	JC/CB/ROK	porcine	94.6	0	O	SEA	Mya-98	
viba_23169	SKR/12/2014	porcine	94.5	0	O	SEA	Mya-98	
viba_23164	SKR/6/2014	porcine	94.0	0	O	SEA	Mya-98	

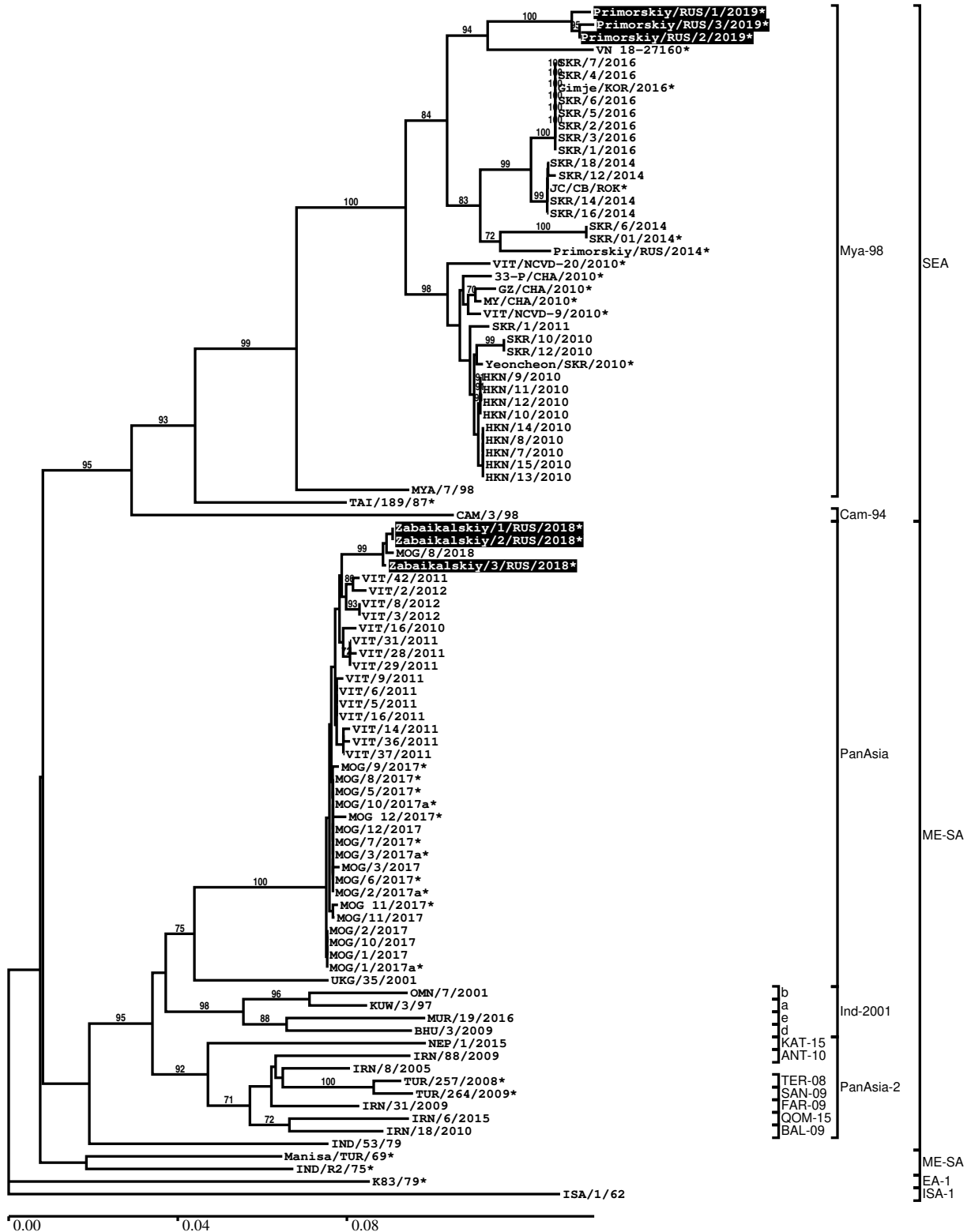
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_199	MYA/7/98	bovine	90.2	0	O	SEA	Mya-98	
viba_68	TAI/189/87	bovine	86.4	0	O	SEA		
viba_576	IND/R2/75		84.2	0	O	ME-SA		
viba_359	Manisa/TUR/69		83.7	0	O	ME-SA		
viba_694	CAM/3/98	bovine	83.6	0	O	SEA	Cam-94	
viba_666	IRN/18/2010	cattle	83.3	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	83.1	0	O	ME-SA	PanAsia-2	
viba_523	K83/79		83.1	0	O	EA-1		
viba_850	NEP/1/2015	cattle	83.1	1	O	ME-SA	PanAsia-2	KAT-15
viba_617	IND/53/79	bovine	83.0	0	O	ME-SA		

Report on FMDV O in Russia in 2018, 2019

Batch: WRLMEG/2019/00019



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2019/00019-Russia-O (6 sequences)
Sequence database set:	allseqs_O (4300 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:	20
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
Primorskiy/RUS/1/2019*	n/a	porcine	ARRIAH	Russia	SEA/Mya-98
Primorskiy/RUS/3/2019*	n/a	porcine	ARRIAH	Russia	SEA/Mya-98
Primorskiy/RUS/2/2019*	n/a	porcine	ARRIAH	Russia	SEA/Mya-98
VN 18-27160*	n/a	porcine	RAHO6	Vietnam	SEA/Mya-98
SKR/7/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/4/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
Gimje/KOR/2016*	n/a	porcine	QIA	Republic of Korea (South Korea)	SEA/Mya-98
SKR/6/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/5/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/2/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/3/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/1/2016	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/18/2014	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/12/2014	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
JC/CB/ROK*	n/a	porcine	Animal and Plant Quarantine Agency	Republic of Korea (South Korea)	SEA/Mya-98

continued on next page

label	accession	host(s)	lab	country	taxonomic information
SKR/14/2014	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/16/2014	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/6/2014	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/01/2014*	n/a	porcine	Animal and Plant Quarantine Agency	Republic of Korea (South Korea)	SEA/Mya-98
Primorskiy/RUS/2014*	n/a	porcine	ARRIAH	Russia	SEA/Mya-98
VIT/NCVD-20/2010*	n/a	cattle	NVRQS	Vietnam	SEA/Mya-98
33-P/CHA/2010*	JQ973889	bovine	LVRI	China	SEA/Mya-98
GZ/CHA/2010*	JN998086	cattle	LVRI	China	SEA/Mya-98
MY/CHA/2010*	HQ652079	porcine	SiChuan University	China	SEA/Mya-98
VIT/NCVD-9/2010*	n/a	cattle	NVRQS	Vietnam	SEA/Mya-98
SKR/1/2011	n/a	cattle	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/10/2010	n/a	cattle	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
SKR/12/2010	KC438373	cattle	WRLFMD	Republic of Korea (South Korea)	SEA/Mya-98
Yeoncheon/SKR/2010*	n/a	porcine	NVRQS	Republic of Korea (South Korea)	SEA/Mya-98
HKN/9/2010	JQ070304	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/11/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/12/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/10/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/14/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/8/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/7/2010	JQ070303	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/15/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
HKN/13/2010	n/a	porcine	WRLFMD	Hong Kong SAR	SEA/Mya-98
MYA/7/98	DQ164925	bovine	WRLFMD	Myanmar	SEA/Mya-98
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
CAM/3/98	AJ294910	bovine	WRLFMD	Cambodia	SEA/Cam-94
Zabaikalskiy/1/RUS/2018*	n/a	cattle	ARRIAH	Russia	ME-SA/PanAsia
Zabaikalskiy/2/RUS/2018*	n/a	cattle	ARRIAH	Russia	ME-SA/PanAsia
MOG/8/2018	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
Zabaikalskiy/3/RUS/2018*	n/a	cattle	ARRIAH	Russia	ME-SA/PanAsia
VIT/42/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/2/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/8/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/3/2012	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/16/2010	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/31/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/28/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/29/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/9/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/6/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/5/2011	n/a	cattle	WRLFMD	Vietnam	ME-SA/PanAsia

continued on next page

label	accession	host(s)	lab	country	taxonomic information
VIT/16/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/14/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/36/2011	n/a	porcine	WRLFMD	Vietnam	ME-SA/PanAsia
VIT/37/2011	n/a	water buffalo	WRLFMD	Vietnam	ME-SA/PanAsia
MOG/9/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/8/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/5/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/10/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG 12/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/12/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/7/2017*	n/a	gazelle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/3/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/3/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/6/2017*	n/a	gazelle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/2/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG 11/2017*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
MOG/11/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/2/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/10/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/1/2017	n/a	cattle	WRLFMD	Mongolia	ME-SA/PanAsia
MOG/1/2017a*	n/a	cattle	ARRIAH	Mongolia	ME-SA/PanAsia
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
OMN/7/2001	DQ164941	bovine	WRLFMD	Oman	ME-SA/Ind-2001/b
KUW/3/97	DQ164904	bovine	WRLFMD	Kuwait	ME-SA/Ind-2001/a
MUR/19/2016	MG972510	cattle	WRLFMD	Mauritius	ME-SA/Ind-2001/e
BHU/3/2009	KM921814	cattle	WRLFMD	Bhutan	ME-SA/Ind-2001/d
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
IND/53/79	AF292107	bovine	PD-FMD	India	ME-SA
Manisa/TUR/69*	AY593823	n/a	PIADC	Turkey	ME-SA
IND/R2/75*	AF204276	n/a	PD-FMD	India	ME-SA
K83/79*	AJ303511	n/a	WRLFMD	Kenya	EA-1
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available