

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

Genotyping Report

FMDV serotype: A
Country: Republic of Korea (South Korea)
Year: 2018
Batch: WRLMEG/2018/00017
No. of sequences: 1
Report date: 4th April 2018
Report generated by: Nick Knowles
Report checked by: Antonello Di Nardo

This report is prepared on behalf of the Animal and Plant Quarantine Agency (Ministry of Agriculture, Food and Rural Affairs, Republic of Korea) and covers a VP1 sequence submitted to the WRLFMD on 04/04/2018.



Animal and Plant
Quarantine Agency



Copyright ©2018 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:	GP/SKR/2/2018
Sender reference:	A/GP/SKR/2/2018_c
Location of origin:	Gimpo-si, Gyeonggi-do
Country of origin:	Republic of Korea (South Korea)
Date of collection:	28/03/2018
Host species:	
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	04/04/2018
Last updated:	04/04/2018
VIBASys IDs: sample 36014, genome 36015, sequence viba_36016, sequencing info 36017	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35998	GP/SKR/2018	porcine	99.8	0	A	ASIA	Sea-97	
viba_20799	GDMM-CHA-2013-S	porcine	95.6	0	A	ASIA	Sea-97	
viba_25259	TAI/3/2015	cattle	95.4	0	A	ASIA	Sea-97	
viba_21164	Zabaikalsky/6/RUS/2013	cattle	95.4	0	A	ASIA	Sea-97	
viba_25988	TAI/13/2015	cattle	95.4	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	95.4	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	95.4	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	95.4	0	A	ASIA	Sea-97	
viba_31504	VIT/12/2015	cattle	95.2	0	A	ASIA	Sea-97	
viba_22520	TAI/17/2014	cattle	95.2	0	A	ASIA	Sea-97	

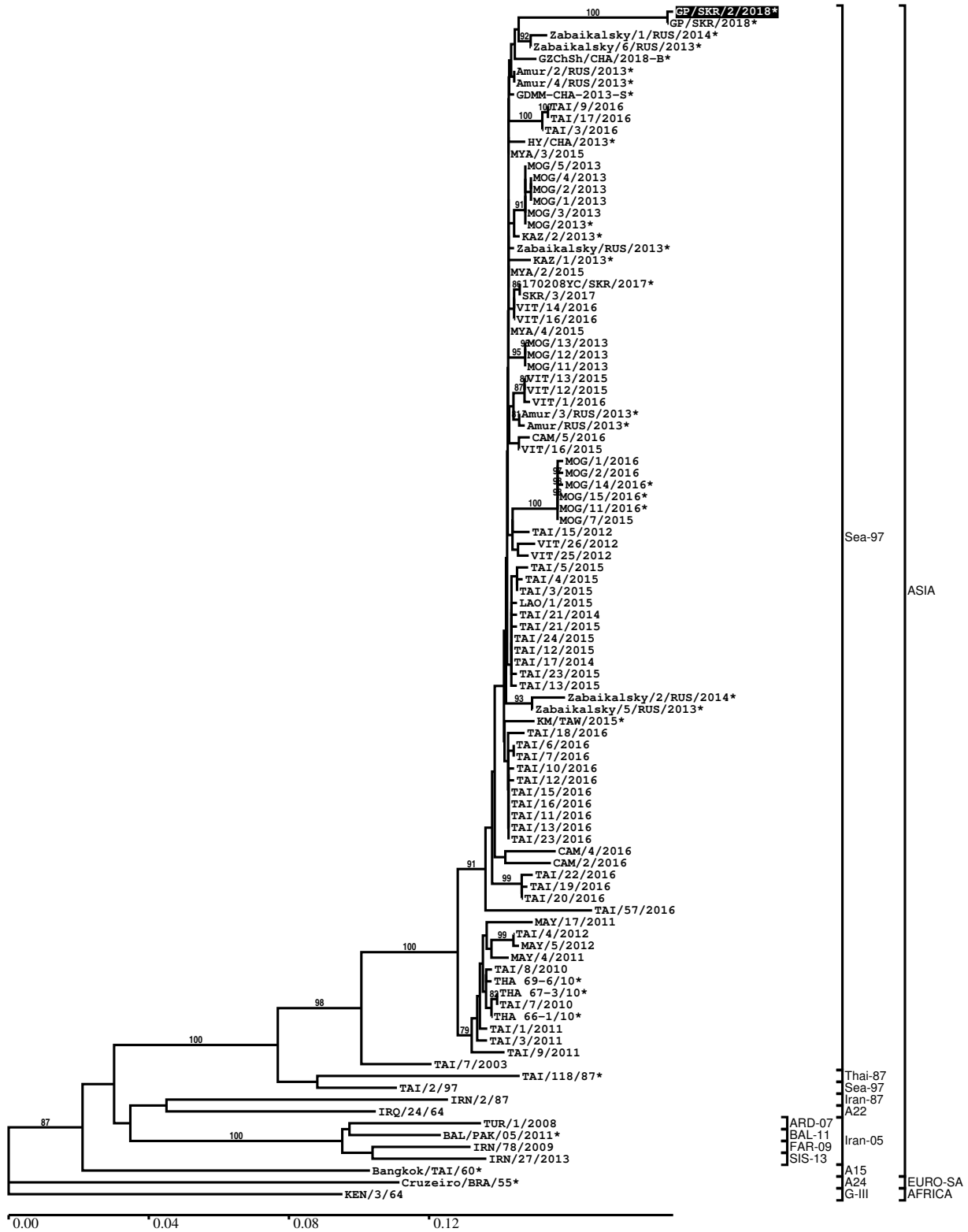
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_122	TAI/7/2003	bovine	90.2	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		86.8	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		84.1	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	80.2	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	79.9	0	A	ASIA	Iran-87	
viba_589	Bangkok/TAI/60		79.3	0	A	ASIA	A15	
viba_636	IRN/78/2009		79.0	0	A	ASIA	Iran-05	FAR-09
viba_34671	BAL/PAK/05/2011	cattle	78.8	0	A	ASIA	Iran-05	BAL-11
viba_20943	IRN/27/2013	cattle	78.6	0	A	ASIA	Iran-05	SIS-13
viba_403	TUR/1/2008	cattle	78.6	0	A	ASIA	Iran-05	ARD-07

Report on FMDV A in Republic of Korea (South Korea) in 2018

Batch: WRLMEG/2018/00017



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLMEG/2018/00017-Republic of Korea (South Korea)-A (1 sequences)
Sequence database set:	allseqs_A (1792 sequences)
Prototype sequence set:	!prototypes_A (40 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	633
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/A

label	accession	host(s)	lab	country	taxonomic information
GP/SKR/2/2018*	n/a	n/a	APQA	Republic of Korea (South Korea)	ASIA/Sea-97
GP/SKR/2018*	n/a	porcine	APQA	Republic of Korea (South Korea)	ASIA/Sea-97
Zabaikalsky/1/RUS/2014*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Zabaikalsky/6/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
GZChSh/CHA/2018-B*	n/a	n/a	LVRI	China	ASIA/Sea-97
Amur/2/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Amur/4/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
GDMM-CHA-2013-S*	KF450794	porcine	n/a	China	ASIA/Sea-97
TAI/9/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/17/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
HY/CHA/2013*	KT968663	yak	Sichuan Univ	China	ASIA/Sea-97
MYA/3/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MOG/5/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/4/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/2/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/1/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/3/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/2013*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
KAZ/2/2013*	n/a	cattle	ARRIAH	Kazakhstan	ASIA/Sea-97
Zabaikalsky/RUS/2013*	n/a	cattle	n/a	Russia	ASIA/Sea-97
KAZ/1/2013*	n/a	cattle	ARRIAH	Kazakhstan	ASIA/Sea-97
MYA/2/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
170208YC/SKR/2017*	KY766148	cattle	QIA	Republic of Korea (South Korea)	ASIA/Sea-97
SKR/3/2017	n/a	cattle	WRLFMD	Republic of Korea (South Korea)	ASIA/Sea-97
VIT/14/2016	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/16/2016	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
MYA/4/2015	n/a	bovine	WRLFMD	Myanmar	ASIA/Sea-97
MOG/13/2013	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97

continued on next page

label	accession	host(s)	lab	country	taxonomic information
MOG/12/2013	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
MOG/11/2013	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
VIT/13/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/12/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/1/2016	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
Amur/3/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Amur/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
CAM/5/2016	n/a	n/a	WRLFMD	Cambodia	ASIA/Sea-97
VIT/16/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
MOG/1/2016	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
MOG/2/2016	n/a	sheep	WRLFMD	Mongolia	ASIA/Sea-97
MOG/14/2016*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
MOG/15/2016*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
MOG/11/2016*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
MOG/7/2015	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
TAI/15/2012	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
VIT/26/2012	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/25/2012	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
TAI/5/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/4/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
LAO/1/2015	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/21/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/21/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/24/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2015	n/a	porcine	WRLFMD	Thailand	ASIA/Sea-97
TAI/17/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/23/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/13/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
Zabaikalsky/2/RUS/2014*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Zabaikalsky/5/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
KM/TAW/2015*	n/a	cattle	NVRI	Taiwan	ASIA/Sea-97
TAI/18/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/6/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/7/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/10/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/16/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/11/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/13/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/23/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
CAM/4/2016	n/a	n/a	WRLFMD	Cambodia	ASIA/Sea-97
CAM/2/2016	n/a	n/a	WRLFMD	Cambodia	ASIA/Sea-97
TAI/22/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/19/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/20/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/57/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
MAY/17/2011	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
TAI/4/2012	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
MAY/5/2012	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
MAY/4/2011	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
TAI/8/2010	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
THA 69-6/10*	n/a	cattle	TRRL	Thailand	ASIA/Sea-97
THA 67-3/10*	n/a	cattle	TRRL	Thailand	ASIA/Sea-97
TAI/7/2010	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
THA 66-1/10*	n/a	cattle	TRRL	Thailand	ASIA/Sea-97
TAI/1/2011	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2011	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/9/2011	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/7/2003	HQ116312	bovine	WRLFMD	Thailand	ASIA/Sea-97
TAI/118/87*	EF208777	n/a	WRLFMD	Thailand	ASIA/Thai-87
TAI/2/97	EF208778	n/a	WRLFMD	Thailand	ASIA/Sea-97
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
TUR/1/2008	FJ755133	cattle	WRLFMD	Turkey	ASIA/Iran-05/ARD-07
BAL/PAK/05/2011*	KT832824	cattle	Univ Malakand	Pakistan	ASIA/Iran-05/BAL-11

continued on next page

label	accession	host(s)	lab	country	taxonomic information
IRN/78/2009	KY091291	n/a	WRLFMD	Iran	ASIA/Iran-05/FAR-09
IRN/27/2013	n/a	cattle	WRLFMD	Iran	ASIA/Iran-05/SIS-13
Bangkok/TAI/60*	AY593755	n/a	PIADC	Thailand	ASIA/A15
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III

*, not a WRLFMD Reference Number

n/a, not available