

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

Genotyping Report

FMDV serotype: A
Country: Republic of Korea (South Korea)
Year: 2018
Batch: WRLFMD/2018/00016
No. of sequences: 1
Report date: 11th 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

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Virus sample name:	SKR/5/2018
Sender reference:	GP-05
Location of origin:	Lim Chan Gi, Dui Wol, 380-2 Yulsaeng-ri, Gimpo, Gyeonggi
Country of origin:	Republic of Korea (South Korea)
Date of collection:	07/04/2018
Host species:	porcine
Serotype:	A
Topotype:	ASIA
Lineage:	Sea-97
Sublineage:	
Sequence length:	630
Ambiguities:	0
Material submitted for sequencing:	RS1
Harvest date of material:	15/05/2018
Primers:	A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R
Received for sequencing:	04/06/2018
Created:	11/06/2018
Last updated:	11/06/2018
VIBASys IDs: sample 36719, genome 36720, sequence viba_36721, sequencing info 36722	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36357	SKR/4/2018	porcine	99.8	0	A	ASIA	Sea-97	
viba_35998	GP/SKR/2018	porcine	99.8	0	A	ASIA	Sea-97	
viba_36016	GP/SKR/2/2018		99.7	0	A	ASIA	Sea-97	
viba_25179	MYA/4/2015	bovine	95.7	0	A	ASIA	Sea-97	
viba_25171	MYA/2/2015	bovine	95.7	0	A	ASIA	Sea-97	
viba_25259	TAI/3/2015	cattle	95.7	0	A	ASIA	Sea-97	
viba_25988	TAI/13/2015	cattle	95.7	0	A	ASIA	Sea-97	
viba_25175	MYA/3/2015	bovine	95.7	0	A	ASIA	Sea-97	
viba_21164	Zabaikalsky/6/RUS/2013	cattle	95.7	0	A	ASIA	Sea-97	
viba_31504	VIT/12/2015	cattle	95.6	0	A	ASIA	Sea-97	

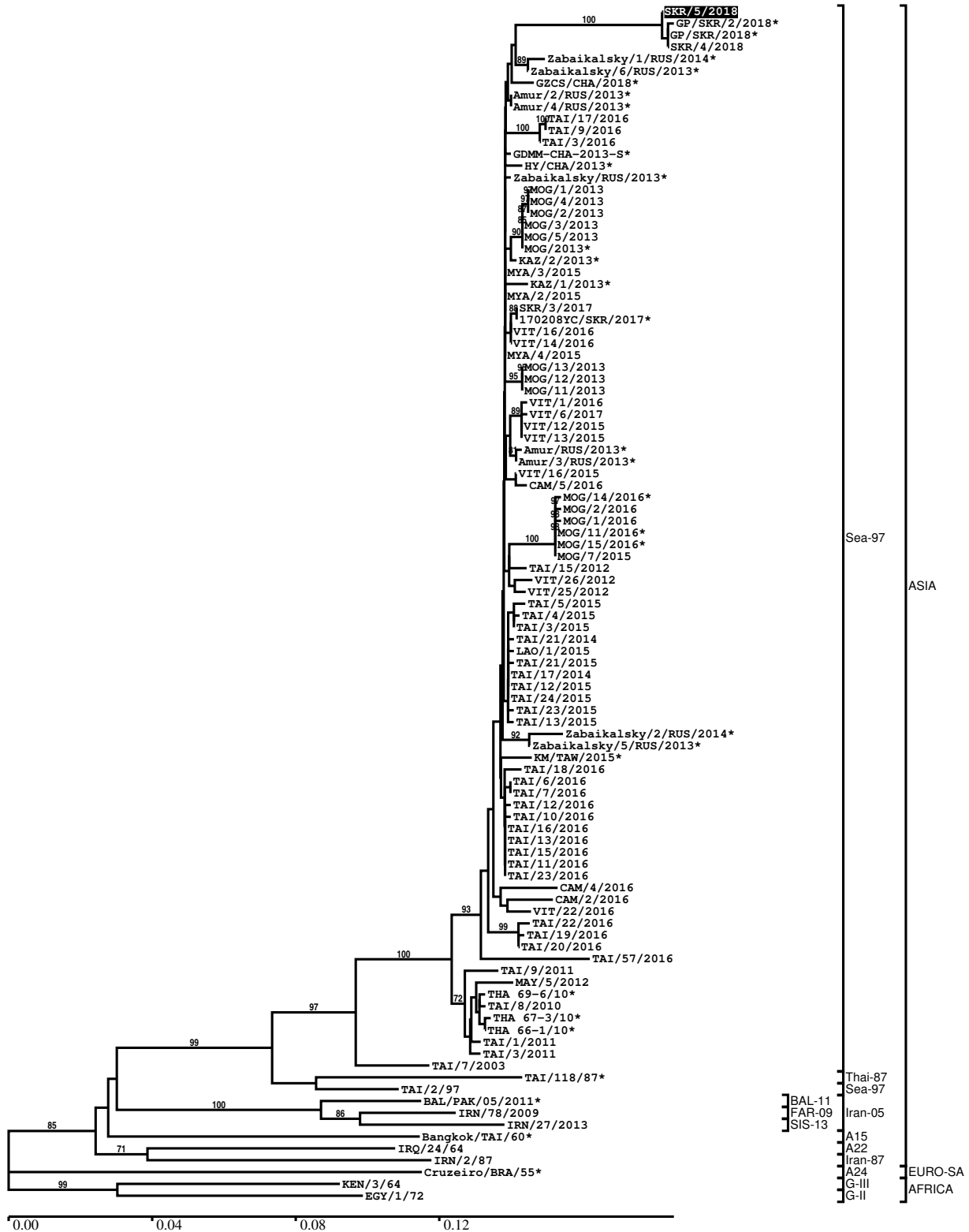
Most Closely Related Prototype Sequences

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	90.5	0	A	ASIA	Sea-97	
viba_625	TAI/2/97		87.1	0	A	ASIA	Sea-97	
viba_630	TAI/118/87		84.5	0	A	ASIA	Thai-87	
viba_677	IRQ/24/64	bovine	80.1	0	A	ASIA	A22	
viba_682	IRN/2/87	bovine	79.6	0	A	ASIA	Iran-87	
viba_589	Bangkok/TAI/60		79.4	0	A	ASIA	A15	
viba_34671	BAL/PAK/05/2011	cattle	79.0	0	A	ASIA	Iran-05	BAL-11
viba_636	IRN/78/2009		79.0	0	A	ASIA	Iran-05	FAR-09
viba_20943	IRN/27/2013	cattle	78.9	0	A	ASIA	Iran-05	SIS-13
viba_688	EGY/1/72	bovine	78.8	0	A	AFRICA	G-II	

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

Batch: WRLFMD/2018/00016



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLFMD/2018/00016-Republic of Korea (South Korea)-A (1 sequences)
Sequence database set:	allseqs_A (1851 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
SKR/5/2018	n/a	porcine	WRLFMD	Republic of Korea (South Korea)	ASIA/Sea-97
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
SKR/4/2018	n/a	porcine	WRLFMD	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
GZCS/CHA/2018*	MG840802	cattle	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
TAI/17/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/9/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/3/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
GDMM-CHA-2013-S*	KF450794	porcine	n/a	China	ASIA/Sea-97
HY/CHA/2013*	KT968663	yak	Sichuan Univ	China	ASIA/Sea-97
Zabaikalsky/RUS/2013*	n/a	cattle	n/a	Russia	ASIA/Sea-97
MOG/1/2013	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/3/2013	n/a	yak	WRLFMD	Mongolia	ASIA/Sea-97
MOG/5/2013	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
MYA/3/2015	n/a	bovine	WRLFMD	Myanmar	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
SKR/3/2017	n/a	cattle	WRLFMD	Republic of Korea (South Korea)	ASIA/Sea-97

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label	accession	host(s)	lab	country	taxonomic information
170208YC/SKR/2017*	KY766148	cattle	QIA	Republic of Korea (South Korea)	ASIA/Sea-97
VIT/16/2016	n/a	porcine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/14/2016	n/a	cattle	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
MOG/12/2013	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
MOG/11/2013	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
VIT/1/2016	n/a	water buffalo	WRLFMD	Vietnam	ASIA/Sea-97
VIT/6/2017	n/a	bovine	WRLFMD	Vietnam	ASIA/Sea-97
VIT/12/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
VIT/13/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
Amur/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
Amur/3/RUS/2013*	n/a	cattle	ARRIAH	Russia	ASIA/Sea-97
VIT/16/2015	n/a	cattle	WRLFMD	Vietnam	ASIA/Sea-97
CAM/5/2016	n/a	n/a	WRLFMD	Cambodia	ASIA/Sea-97
MOG/14/2016*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
MOG/2/2016	n/a	sheep	WRLFMD	Mongolia	ASIA/Sea-97
MOG/1/2016	n/a	cattle	WRLFMD	Mongolia	ASIA/Sea-97
MOG/11/2016*	n/a	cattle	ARRIAH	Mongolia	ASIA/Sea-97
MOG/15/2016*	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
TAI/21/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
LAO/1/2015	n/a	cattle	WRLFMD	Laos	ASIA/Sea-97
TAI/21/2015	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/17/2014	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/12/2015	n/a	porcine	WRLFMD	Thailand	ASIA/Sea-97
TAI/24/2015	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/12/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/10/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/16/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/13/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/15/2016	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
TAI/11/2016	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
VIT/22/2016	n/a	bovine	WRLFMD	Vietnam	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
TAI/9/2011	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
MAY/5/2012	n/a	cattle	WRLFMD	Malaysia	ASIA/Sea-97
THA 69-6/10*	n/a	cattle	TRRL	Thailand	ASIA/Sea-97
TAI/8/2010	n/a	cattle	WRLFMD	Thailand	ASIA/Sea-97
THA 67-3/10*	n/a	cattle	TRRL	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/7/2003	HQ116312	bovine	WRLFMD	Thailand	ASIA/Sea-97
TAI/118/87*	EF208777	n/a	WRLFMD	Thailand	ASIA/Thai-87

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label	accession	host(s)	lab	country	taxonomic information
TAI/2/97	EF208778	n/a	WRLFMD	Thailand	ASIA/Sea-97
BAL/PAK/05/2011*	KT832824	cattle	Univ Malakand	Pakistan	ASIA/Iran-05/BAL-11
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
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
IRN/2/87	EF208770	bovine	WRLFMD	Iran	ASIA/Iran-87
Cruzeiro/BRA/55*	AY593768	bovine	PIADC	Brazil	EURO-SA/A24
KEN/3/64	AY593761	n/a	PIADC	Kenya	AFRICA/G-III
EGY/1/72	EF208756	bovine	WRLFMD	Egypt	AFRICA/G-II

*, not a WRLFMD Reference Number

n/a, not available