

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

Genotyping Report

FMDV serotype: A
Country: Iran
Year: 2020
Batch: WRLMEG/2020/00036
No. of sequences: 6
Report date: 29th November 2020
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth

This report is prepared on behalf of the Central Veterinary Laboratory, Iran Veterinary Organization, Tehran, Iran and covers six VP1 sequences submitted to the WRLFMD on 25/11/2020.



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Virus sample name:	IRN/99127/2020
Sender reference:	A/IRN/99127/Cow/Ardabil/990229
Location of origin:	Ardabil
Country of origin:	Iran
Date of collection:	18/05/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	29/11/2020
VIBASys IDs: sample 45655, genome 45682, sequence viba_45683, sequencing info 45684	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45686	IRN/991471/2020	cattle	98.7	0	A	ASIA	Iran-05	FAR-11
viba_45665	IRN/99466/2020	cattle	98.3	0	A	ASIA	Iran-05	FAR-11
viba_45677	IRN/994883/2020	cattle	98.3	0	A	ASIA	Iran-05	FAR-11
viba_45669	IRN/99483/2020	cattle	98.1	0	A	ASIA	Iran-05	FAR-11
viba_45673	IRN/99486/2020	cattle	97.9	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	96.7	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	94.9	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	94.9	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	94.8	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	94.8	0	A	ASIA	Iran-05	FAR-11

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.0	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.4	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	93.0	0	A	ASIA	Iran-05	AFG-07
viba_13615	IRN/134/2010	cattle	92.6	0	A	ASIA	Iran-05	HER-10
viba_636	IRN/78/2009	cattle	92.4	0	A	ASIA	Iran-05	FAR-09
viba_557	IRN/15/2012	bovine	92.4	0	A	ASIA	Iran-05	SIS-12
viba_34671	BAL/PAK/05/2011	cattle	92.3	0	A	ASIA	Iran-05	BAL-11
viba_319	BAR/6/2008	bovine	92.3	0	A	ASIA	Iran-05	BAR-08
viba_133	IRN/1/2005	cattle	92.1	0	A	ASIA	Iran-05	
viba_403	TUR/1/2008	cattle	91.5	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	IRN/991471/2020
Sender reference:	A/IRN/991471/Cow/East Az/990310
Location of origin:	East Azerbaijan
Country of origin:	Iran
Date of collection:	30/05/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	29/11/2020
VIBASys IDs: sample 45659, genome 45685, sequence viba_45686, sequencing info 45687	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45665	IRN/99466/2020	cattle	99.5	0	A	ASIA	Iran-05	FAR-11
viba_45677	IRN/994883/2020	cattle	99.5	0	A	ASIA	Iran-05	FAR-11
viba_45669	IRN/99483/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45673	IRN/99486/2020	cattle	99.2	0	A	ASIA	Iran-05	FAR-11
viba_45683	IRN/99127/2020	cattle	98.7	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	97.0	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	95.4	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	95.3	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	95.1	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	95.1	0	A	ASIA	Iran-05	FAR-11

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.3	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.7	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	93.4	0	A	ASIA	Iran-05	AFG-07
viba_557	IRN/15/2012	bovine	92.9	0	A	ASIA	Iran-05	SIS-12
viba_13615	IRN/134/2010	cattle	92.9	0	A	ASIA	Iran-05	HER-10
viba_34671	BAL/PAK/05/2011	cattle	92.6	0	A	ASIA	Iran-05	BAL-11
viba_636	IRN/78/2009		92.4	0	A	ASIA	Iran-05	FAR-09
viba_319	BAR/6/2008	bovine	92.3	0	A	ASIA	Iran-05	BAR-08
viba_133	IRN/1/2005	cattle	92.1	0	A	ASIA	Iran-05	
viba_403	TUR/1/2008	cattle	91.8	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	IRN/99466/2020
Sender reference:	A/IRN/99466/Cow/Qom/990729
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	20/10/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	25/11/2020
VIBASys IDs: sample 45663, genome 45664, sequence viba_45665, sequencing info 45666	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45669	IRN/99483/2020	cattle	99.8	0	A	ASIA	Iran-05	FAR-11
viba_45686	IRN/991471/2020	cattle	99.5	0	A	ASIA	Iran-05	FAR-11
viba_45677	IRN/994883/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45673	IRN/99486/2020	cattle	99.1	0	A	ASIA	Iran-05	FAR-11
viba_45683	IRN/99127/2020	cattle	98.3	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	96.8	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	95.3	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	95.1	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	94.9	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	94.9	0	A	ASIA	Iran-05	FAR-11

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.2	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.8	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	93.5	0	A	ASIA	Iran-05	AFG-07
viba_34671	BAL/PAK/05/2011	cattle	92.7	0	A	ASIA	Iran-05	BAL-11
viba_557	IRN/15/2012	bovine	92.7	0	A	ASIA	Iran-05	SIS-12
viba_13615	IRN/134/2010	cattle	92.7	0	A	ASIA	Iran-05	HER-10
viba_319	BAR/6/2008	bovine	92.4	0	A	ASIA	Iran-05	BAR-08
viba_636	IRN/78/2009	cattle	92.3	0	A	ASIA	Iran-05	FAR-09
viba_133	IRN/1/2005	cattle	91.9	0	A	ASIA	Iran-05	
viba_403	TUR/1/2008	cattle	91.6	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	IRN/99483/2020
Sender reference:	A/IRN/99483/Cow/Qom/990729
Location of origin:	Qom
Country of origin:	Iran
Date of collection:	20/10/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	25/11/2020
VIBASys IDs: sample 45667, genome 45668, sequence viba_45669, sequencing info 45670	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45665	IRN/99466/2020	cattle	99.8	0	A	ASIA	Iran-05	FAR-11
viba_45686	IRN/991471/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45677	IRN/994883/2020	cattle	99.2	0	A	ASIA	Iran-05	FAR-11
viba_45673	IRN/99486/2020	cattle	98.9	0	A	ASIA	Iran-05	FAR-11
viba_45683	IRN/99127/2020	cattle	98.1	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	96.7	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	95.1	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	94.9	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	94.8	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	94.8	0	A	ASIA	Iran-05	FAR-11

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.0	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.7	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	93.4	0	A	ASIA	Iran-05	AFG-07
viba_34671	BAL/PAK/05/2011	cattle	92.6	0	A	ASIA	Iran-05	BAL-11
viba_557	IRN/15/2012	bovine	92.6	0	A	ASIA	Iran-05	SIS-12
viba_13615	IRN/134/2010	cattle	92.6	0	A	ASIA	Iran-05	HER-10
viba_319	BAR/6/2008	bovine	92.3	0	A	ASIA	Iran-05	BAR-08
viba_636	IRN/78/2009		92.1	0	A	ASIA	Iran-05	FAR-09
viba_133	IRN/1/2005	cattle	91.8	0	A	ASIA	Iran-05	
viba_403	TUR/1/2008	cattle	91.5	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	IRN/99486/2020
Sender reference:	A/IRN/99486/Cow/Qazvin/990805
Location of origin:	Qazvin
Country of origin:	Iran
Date of collection:	26/10/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	25/11/2020
VIBASys IDs: sample 45671, genome 45672, sequence viba_45673, sequencing info 45674	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45677	IRN/994883/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45686	IRN/991471/2020	cattle	99.2	0	A	ASIA	Iran-05	FAR-11
viba_45665	IRN/99466/2020	cattle	99.1	0	A	ASIA	Iran-05	FAR-11
viba_45669	IRN/99483/2020	cattle	98.9	0	A	ASIA	Iran-05	FAR-11
viba_45683	IRN/99127/2020	cattle	97.9	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	96.5	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	94.9	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	94.8	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	94.6	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	94.6	0	A	ASIA	Iran-05	FAR-11

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.2	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.2	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	92.9	0	A	ASIA	Iran-05	AFG-07
viba_557	IRN/15/2012	bovine	92.4	0	A	ASIA	Iran-05	SIS-12
viba_13615	IRN/134/2010	cattle	92.4	0	A	ASIA	Iran-05	HER-10
viba_34671	BAL/PAK/05/2011	cattle	92.1	0	A	ASIA	Iran-05	BAL-11
viba_319	BAR/6/2008	bovine	92.1	0	A	ASIA	Iran-05	BAR-08
viba_636	IRN/78/2009		91.9	0	A	ASIA	Iran-05	FAR-09
viba_133	IRN/1/2005	cattle	91.6	0	A	ASIA	Iran-05	
viba_403	TUR/1/2008	cattle	91.6	0	A	ASIA	Iran-05	ARD-07

Virus sample name:	IRN/994883/2020
Sender reference:	A/IRN/994883/Cow/West Az/990823
Location of origin:	West Azerbaijan
Country of origin:	Iran
Date of collection:	13/11/2020
Host species:	cattle
Serotype:	A
Topotype:	ASIA
Lineage:	Iran-05
Sublineage:	FAR-11
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:	25/11/2020
Last updated:	25/11/2020
VIBASys IDs: sample 45675, genome 45676, sequence viba_45677, sequencing info 45678	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_45686	IRN/991471/2020	cattle	99.5	0	A	ASIA	Iran-05	FAR-11
viba_45665	IRN/99466/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45673	IRN/99486/2020	cattle	99.4	0	A	ASIA	Iran-05	FAR-11
viba_45669	IRN/99483/2020	cattle	99.2	0	A	ASIA	Iran-05	FAR-11
viba_45683	IRN/99127/2020	cattle	98.3	0	A	ASIA	Iran-05	FAR-11
viba_44782	PAK/73/2019	cattle	97.2	0	A	ASIA	Iran-05	FAR-11
viba_30276	AFG/5/2016	bovine	95.3	0	A	ASIA	Iran-05	FAR-11
viba_35086	PAK/25/2016	water buffalo	95.1	0	A	ASIA	Iran-05	FAR-11
viba_22439	PAK/41/2014	cattle	94.9	0	A	ASIA	Iran-05	FAR-11
viba_22447	PAK/43/2014	cattle	94.9	0	A	ASIA	Iran-05	FAR-11

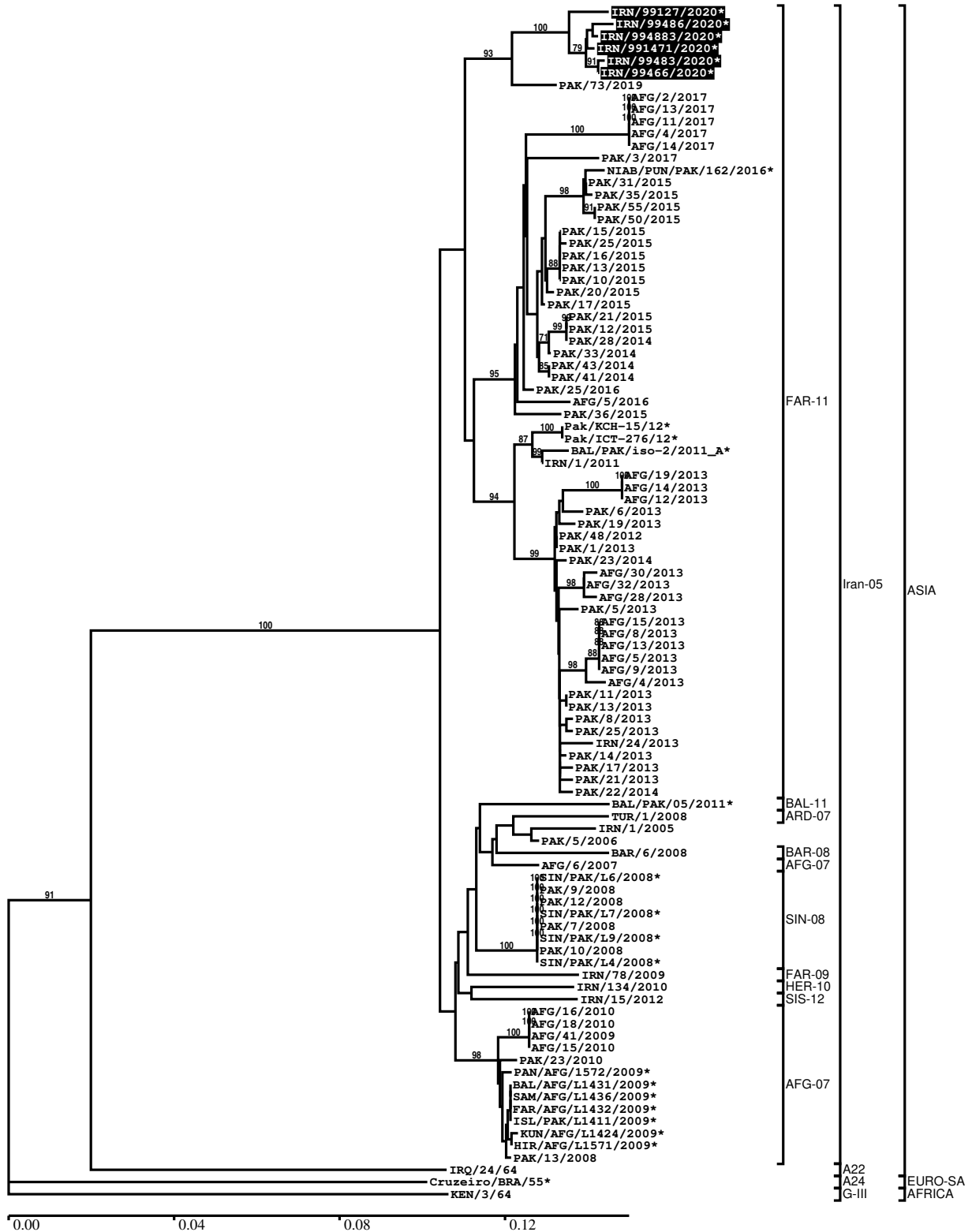
Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_594	IRN/1/2011	bovine	94.2	0	A	ASIA	Iran-05	FAR-11
viba_10508	PAK/7/2008	water buffalo	93.5	0	A	ASIA	Iran-05	SIN-08
viba_414	AFG/6/2007	bovine	93.2	0	A	ASIA	Iran-05	AFG-07
viba_557	IRN/15/2012	bovine	92.7	0	A	ASIA	Iran-05	SIS-12
viba_13615	IRN/134/2010	cattle	92.7	0	A	ASIA	Iran-05	HER-10
viba_34671	BAL/PAK/05/2011	cattle	92.4	0	A	ASIA	Iran-05	BAL-11
viba_319	BAR/6/2008	bovine	92.4	0	A	ASIA	Iran-05	BAR-08
viba_133	IRN/1/2005	cattle	92.3	0	A	ASIA	Iran-05	
viba_636	IRN/78/2009		92.3	0	A	ASIA	Iran-05	FAR-09
viba_403	TUR/1/2008	cattle	91.6	0	A	ASIA	Iran-05	ARD-07

Report on FMDV A in Iran in 2020

Batch: WRLMEG/2020/00036



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_A
Query sequence set:	WRLMEG/2020/00036-Iran-A (6 sequences)
Sequence database set:	allseqs_A (2201 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
IRN/99127/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
IRN/99486/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
IRN/994883/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
IRN/991471/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
IRN/99483/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
IRN/99466/2020*	n/a	cattle	CVL-IVO	Iran	ASIA/Iran-05/FAR-11
PAK/73/2019	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
AFG/2/2017	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/13/2017	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/11/2017	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/4/2017	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/14/2017	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
PAK/3/2017	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
NIAB/PUN/PAK/162/2016*	MF140440	water buffalo	NIAB	Pakistan	ASIA/Iran-05/FAR-11
PAK/31/2015	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/35/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/55/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/50/2015	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/15/2015	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/25/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/16/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/13/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/10/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/20/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/17/2015	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/21/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/12/2015	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/28/2014	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/33/2014	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/43/2014	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/41/2014	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/25/2016	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
AFG/5/2016	n/a	bovine	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
PAK/36/2015	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
Pak/KCH-15/12*	KU360079	cattle	PIADC	Pakistan	ASIA/Iran-05/FAR-11
Pak/ICT-276/12*	KU258637	bovine	PIADC	Pakistan	ASIA/Iran-05/FAR-11

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label	accession	host(s)	lab	country	taxonomic information
BAL/PAK/iso-2/2011_A*	JX435106	cattle	ANSES	Pakistan	ASIA/Iran-05/FAR-11
IRN/1/2011	KY091292	bovine	WRLFMD	Iran	ASIA/Iran-05/FAR-11
AFG/19/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/14/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/12/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
PAK/6/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/19/2013	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/48/2012	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/1/2013	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/23/2014	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
AFG/30/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/32/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/28/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
PAK/5/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
AFG/15/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/8/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/13/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/5/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/9/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
AFG/4/2013	n/a	cattle	WRLFMD	Afghanistan	ASIA/Iran-05/FAR-11
PAK/11/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/13/2013	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/8/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/25/2013	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
IRN/24/2013	n/a	goat	WRLFMD	Iran	ASIA/Iran-05/FAR-11
PAK/14/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/17/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/21/2013	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
PAK/22/2014	n/a	cattle	WRLFMD	Pakistan	ASIA/Iran-05/FAR-11
BAL/PAK/05/2011*	KT832824	cattle	Univ Malakand	Pakistan	ASIA/Iran-05/BAL-11
TUR/1/2008	FJ755133	cattle	WRLFMD	Turkey	ASIA/Iran-05/ARD-07
IRN/1/2005	EF208769	cattle	WRLFMD	Iran	ASIA/Iran-05
PAK/5/2006	FJ755084	cattle	n/a	Pakistan	ASIA/Iran-05
BAR/6/2008	FJ755010	bovine	WRLFMD	Bahrain	ASIA/Iran-05/BAR-08
AFG/6/2007	FJ755007	bovine	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
SIN/PAK/L6/2008*	HQ439240	water buffalo	LINDHOLM	Pakistan	ASIA/Iran-05/SIN-08
PAK/9/2008	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/SIN-08
PAK/12/2008	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/SIN-08
SIN/PAK/L7/2008*	HQ439241	water buffalo	LINDHOLM	Pakistan	ASIA/Iran-05/SIN-08
PAK/7/2008	MN276047	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/SIN-08
SIN/PAK/L9/2008*	HQ439243	water buffalo	LINDHOLM	Pakistan	ASIA/Iran-05/SIN-08
PAK/10/2008	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/SIN-08
SIN/PAK/L4/2008*	HQ439239	water buffalo	LINDHOLM	Pakistan	ASIA/Iran-05/SIN-08
IRN/78/2009	KY091291	n/a	WRLFMD	Iran	ASIA/Iran-05/FAR-09
IRN/134/2010	n/a	IRN	WRLFMD	Iran	ASIA/Iran-05/HER-10
IRN/15/2012	KY091297	bovine	WRLFMD	Iran	ASIA/Iran-05/SIS-12
AFG/16/2010	n/a	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
AFG/18/2010	n/a	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
AFG/41/2009	n/a	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
AFG/15/2010	n/a	n/a	WRLFMD	Afghanistan	ASIA/Iran-05/AFG-07
PAK/23/2010	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/AFG-07
PAN/AFG/1572/2009*	HQ439290	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
BAL/AFG/L1431/2009*	HQ439271	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
SAM/AFG/L1436/2009*	HQ439275	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
FAR/AFG/L1432/2009*	HQ439272	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
ISL/PAK/L1411/2009*	HQ439256	cattle	LINDHOLM	Pakistan	ASIA/Iran-05/AFG-07
KUN/AFG/L1424/2009*	HQ439266	cattle	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
HIR/AFG/L1571/2009*	HQ439289	goat	LINDHOLM	Afghanistan	ASIA/Iran-05/AFG-07
PAK/13/2008	n/a	water buffalo	WRLFMD	Pakistan	ASIA/Iran-05/AFG-07
IRQ/24/64	AY593763	bovine	PIADC	Iraq	ASIA/A22
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