

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

Genotyping Report

FMDV serotype: Asia1
Country: Iran
Year: 2016
Batch: WRLFMD/2016/00018
No. of sequences: 1
Report date: 6th July 2016
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth

Analysis Parameters

VP1 subsequence extractor: vp1_Asia1
Query sequence set: WRLFMD/2016/00018-Iran-Asia1 (1 sequences)
Sequence database set: allseqs_Asia1 (380 sequences)
Prototype sequence set: prototypes_Asia1 (11 sequences)
Number of related sequences reported: 10
Minimal VP1 subsequence match length: 600
VIBASys version: reflabs-1.0.2



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

email: reporting@pirbright.ac.uk

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Virus sample name:	IRN/26/2016
Sender reference:	IR/95/21
Location of origin:	Alborz
Country of origin:	Iran
Date of collection:	18/04/2016
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	Sindh-08
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	23/06/2016
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	04/07/2016
Created:	05/07/2016
Last updated:	05/07/2016
VIBASys IDs: sample 27655, genome 27656, sequence viba_27657, sequencing info 27658	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_25346	TUR/12/2015	cattle	99.4	0	Asia1	ASIA	Sindh-08	
viba_25338	TUR/7/2015	cattle	99.4	0	Asia1	ASIA	Sindh-08	
viba_25334	TUR/2/2015	cattle	99.4	0	Asia1	ASIA	Sindh-08	
viba_25342	TUR/9/2015	cattle	99.2	0	Asia1	ASIA	Sindh-08	
viba_25330	PAK/1/2015	water buffalo	99.0	0	Asia1	ASIA	Sindh-08	
viba_25350	TUR/18/2015	cattle	98.9	0	Asia1	ASIA	Sindh-08	
viba_26032	PAK/43/2015	cattle	98.9	0	Asia1	ASIA	Sindh-08	
viba_25875	IRN/2/2015	cattle	98.7	0	Asia1	ASIA	Sindh-08	
viba_25871	IRN/1/2015	cattle	98.7	2	Asia1	ASIA	Sindh-08	
viba_25879	IRN/20/2015	cattle	98.6	0	Asia1	ASIA	Sindh-08	

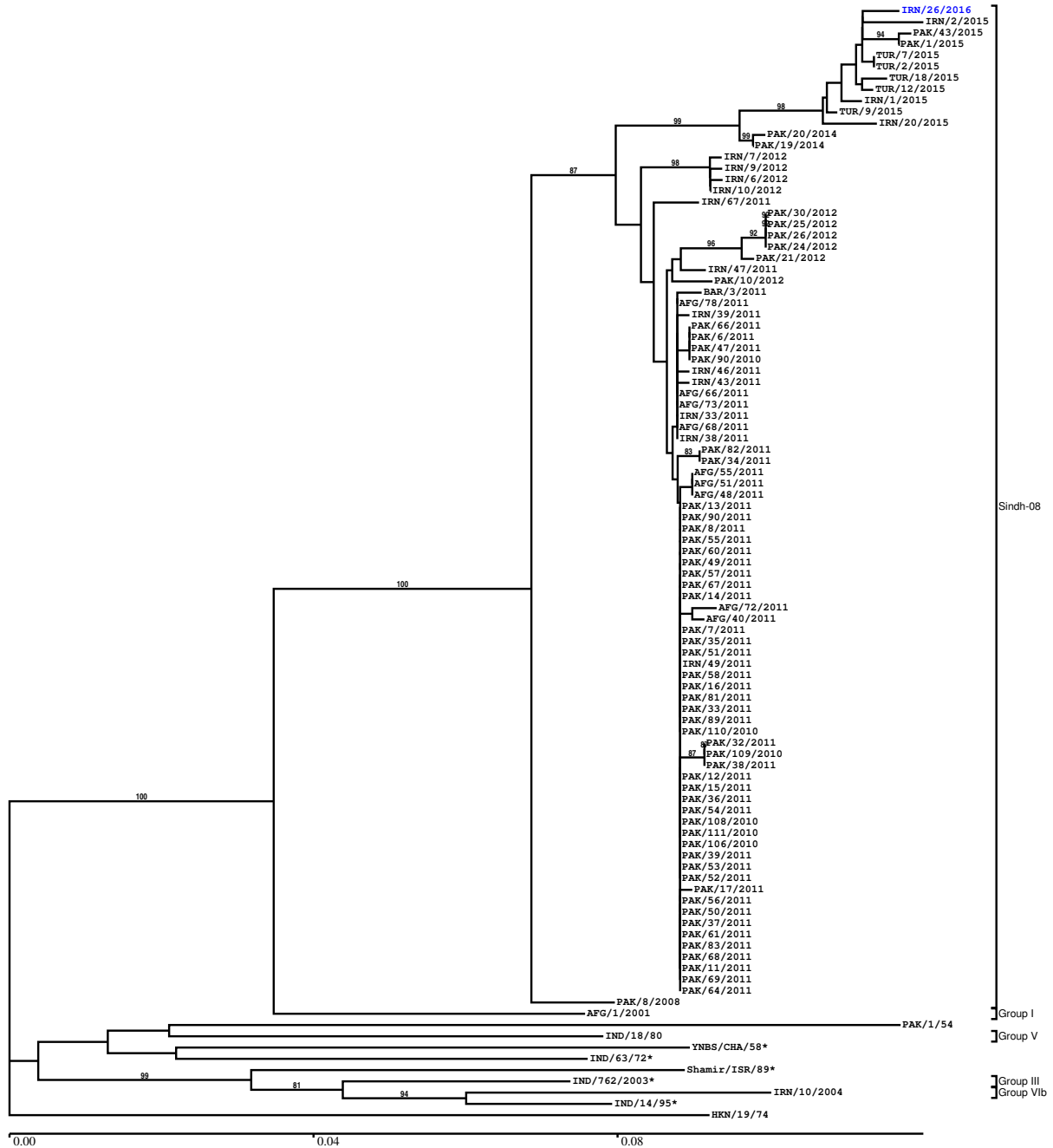
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_206	PAK/8/2008	water buffalo	93.5	0	Asia1	ASIA	Sindh-08	
viba_167	AFG/1/2001	bovine	89.6	0	Asia1	ASIA	Group I	
viba_385	IND/762/2003	bovine	84.4	0	Asia1	ASIA	Group III	
viba_737	IND/18/80	bovine	83.9	0	Asia1	ASIA	Group V	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		
viba_297	IND/63/72		83.7	0	Asia1	ASIA		
viba_161	IND/14/95	bovine	83.1	0	Asia1	ASIA		
viba_551	YNBS/CHA/58	bovine	82.9	0	Asia1	ASIA		
viba_775	IRN/10/2004	cattle	82.6	0	Asia1	ASIA	Group VIb	
viba_146	Shamir/ISR/89	bovine	82.5	0	Asia1	ASIA		

Report on FMDV Asia1 in Iran in 2016

Batch: WRLFMD/2016/00018



Sequence alignment method: muscle (default parameters)
 Phylogeny reconstruction method: fdnadist, fneighbor
 Number of bootstrap samples: 1000
 Displaying bootstrap values above: 70.0%
 Number of sequences in tree capped at: 100
 *, not a WRLFMD Reference Number

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/Asia1/ASIA

label	accession	host(s)	lab	country	taxonomic information
IRN/26/2016	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/2/2015	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/43/2015	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/1/2015	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
TUR/7/2015	n/a	cattle	WRLFMD	Turkey	Sindh-08
TUR/2/2015	n/a	cattle	WRLFMD	Turkey	Sindh-08
TUR/18/2015	n/a	cattle	WRLFMD	Turkey	Sindh-08
TUR/12/2015	n/a	cattle	WRLFMD	Turkey	Sindh-08
IRN/1/2015	n/a	cattle	WRLFMD	Iran	Sindh-08
TUR/9/2015	n/a	cattle	WRLFMD	Turkey	Sindh-08
IRN/20/2015	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/20/2014	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/19/2014	n/a	cattle	WRLFMD	Pakistan	Sindh-08
IRN/7/2012	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/9/2012	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/6/2012	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/10/2012	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/67/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/30/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/25/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/26/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/24/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/21/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
IRN/47/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/10/2012	n/a	cattle	WRLFMD	Pakistan	Sindh-08
BAR/3/2011	n/a	n/a	WRLFMD	Bahrain	Sindh-08
AFG/78/2011	n/a	cattle	WRLFMD	Afghanistan	Sindh-08
IRN/39/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/66/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/6/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/47/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/90/2010	n/a	cattle	WRLFMD	Pakistan	Sindh-08
IRN/46/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
IRN/43/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
AFG/66/2011	n/a	cattle	WRLFMD	Afghanistan	Sindh-08
AFG/73/2011	n/a	cattle	WRLFMD	Afghanistan	Sindh-08
IRN/33/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
AFG/68/2011	n/a	cattle	WRLFMD	Afghanistan	Sindh-08
IRN/38/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/82/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/34/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
AFG/55/2011	n/a	n/a	WRLFMD	Afghanistan	Sindh-08
AFG/51/2011	n/a	n/a	WRLFMD	Afghanistan	Sindh-08
AFG/48/2011	n/a	n/a	WRLFMD	Afghanistan	Sindh-08
PAK/13/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/90/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/8/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/55/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/60/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/49/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/57/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/67/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/14/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
AFG/72/2011	n/a	cattle	WRLFMD	Afghanistan	Sindh-08
AFG/40/2011	n/a	n/a	WRLFMD	Afghanistan	Sindh-08
PAK/7/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/35/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/51/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
IRN/49/2011	n/a	cattle	WRLFMD	Iran	Sindh-08
PAK/58/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08

continued on next page

label	accession	host(s)	lab	country	taxonomic information
PAK/16/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/81/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/33/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/89/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/110/2010	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/32/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/109/2010	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/38/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/12/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/15/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/36/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/54/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/108/2010	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/111/2010	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/106/2010	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/39/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/53/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/52/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/17/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/56/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/50/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/37/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/61/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/83/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/68/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/11/2011	n/a	cattle	WRLFMD	Pakistan	Sindh-08
PAK/69/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/64/2011	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
PAK/8/2008	n/a	water buffalo	WRLFMD	Pakistan	Sindh-08
AFG/1/2001	DQ121109	bovine	WRLFMD	Afghanistan	Group I
PAK/1/54	AY593795	n/a	PIADC	Pakistan	
IND/18/80	DQ121116	bovine	WRLFMD	India	Group V
YNBS/CHA/58*	AY390432	bovine	LVRI	China	
IND/63/72*	AY304994	n/a	IVRI-Bangalore	India	
Shamir/ISR/89*	n/a	bovine	BFAV	Israel	
IND/762/2003*	DQ101240	bovine	PD-FMD	India	Group III
IRN/10/2004	DQ121119	cattle	WRLFMD	Iran	Group VIb
IND/14/95*	AF390678	bovine	PD-FMD	India	
HKN/19/74	n/a	bovine	WRLFMD	Hong Kong SAR	

*, not a WRLFMD Reference Number

n/a, not available