

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

Genotyping Report

FMDV serotype: O
Country: Turkey
Year: 2017
Batch: WRLMEG/2017/00045
No. of sequences: 1
Report date: 14th July 2017
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:	Tokat/276/2017.519
Sender reference:	O/Tokat/276/2017.519
Location of origin:	Tokat
Country of origin:	Turkey
Date of collection:	09/07/2017
Host species:	
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	QOM-15
Sequence length:	633
Ambiguities:	1
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	14/07/2017
Last updated:	14/07/2017
VIBASys IDs: sample 34053, genome 34054, sequence viba_34055, sequencing info 34056	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_23744	KUW/4/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27685	IRN/16/2016	sheep	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_23740	KUW/2/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27681	IRN/15/2016	sheep	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27669	IRN/9/2016	dog	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_23736	KUW/1/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27677	IRN/13/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27701	IRN/21/2016	cattle	97.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_27721	IRN/29/2016	sheep	97.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_860	IRN/6/2015	cattle	97.8	0	O	ME-SA	PanAsia-2	QOM-15

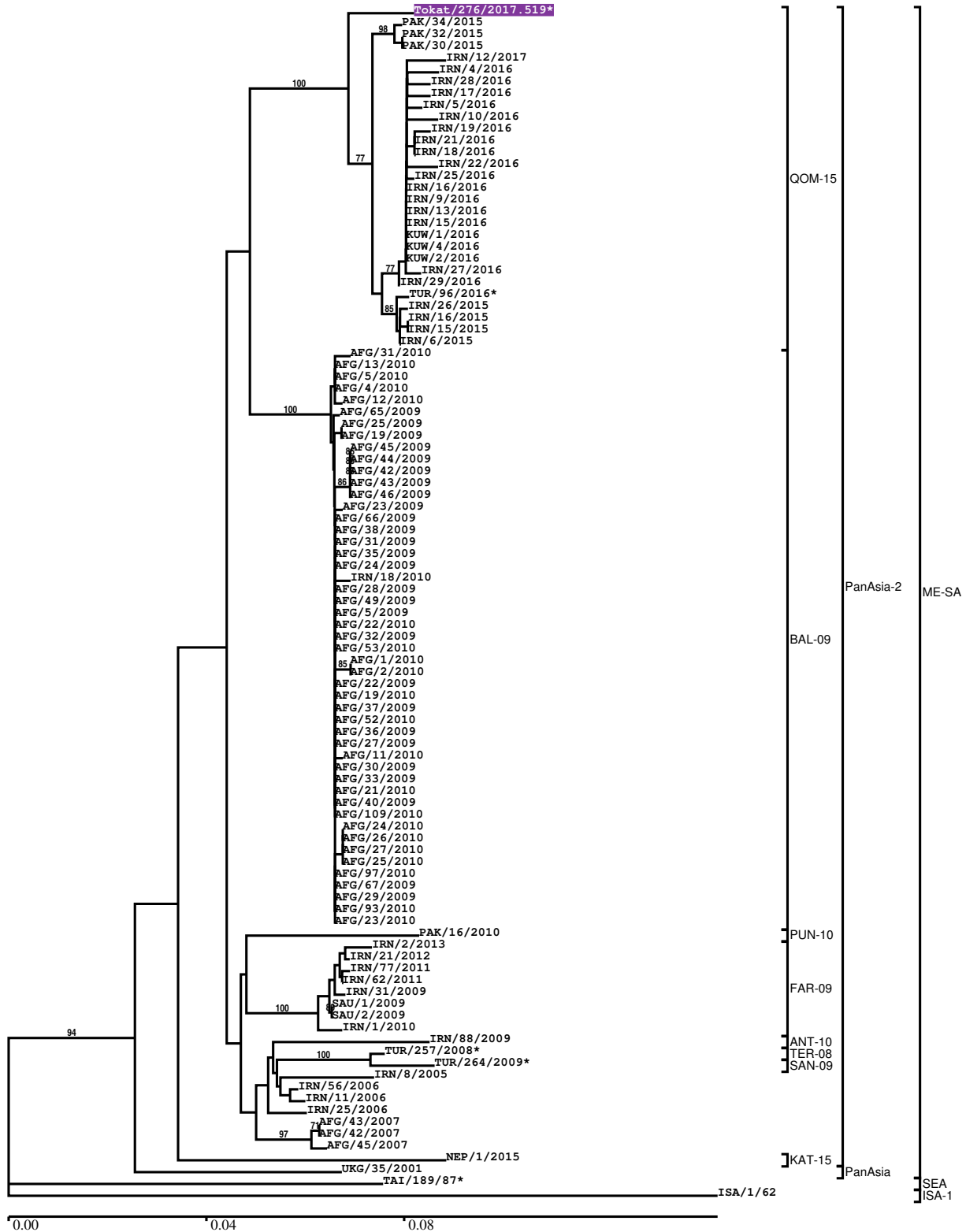
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_860	IRN/6/2015	cattle	97.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	94.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	93.5	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	92.6	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		92.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		91.9	0	O	ME-SA	PanAsia-2	TER-08
viba_354	PAK/16/2010	cattle	91.8	0	O	ME-SA	PanAsia-2	PUN-10
viba_850	NEP/1/2015	cattle	91.5	1	O	ME-SA	PanAsia-2	KAT-15
viba_285	UKG/35/2001	porcine	91.0	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		91.0	0	O	ME-SA	PanAsia-2	SAN-09

Report on FMDV O in Turkey in 2017

Batch: WRLMEG/2017/00045



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2017/00045-Turkey-O (1 sequences)
Sequence database set:	allseqs_O (3551 sequences)
Prototype sequence set:	!prototypes_O (47 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:	10
VIBASys version:	master-1.1.0-17-gf69a4d1

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/O

label	accession	host(s)	lab	country	taxonomic information
Tokat/276/2017.519*	n/a	n/a	FMDI	Turkey	ME-SA/PanAsia-2/QOM-15
PAK/34/2015	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/QOM-15
PAK/32/2015	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/QOM-15
PAK/30/2015	n/a	water buffalo	WRLFMD	Pakistan	ME-SA/PanAsia-2/QOM-15
IRN/12/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/4/2016	n/a	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/28/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/17/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/5/2016	n/a	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/10/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/19/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/21/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/22/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/25/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/16/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/9/2016	n/a	dog	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/13/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/15/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
KUW/1/2016	n/a	cattle	WRLFMD	Kuwait	ME-SA/PanAsia-2/QOM-15
KUW/4/2016	n/a	cattle	WRLFMD	Kuwait	ME-SA/PanAsia-2/QOM-15
KUW/2/2016	n/a	cattle	WRLFMD	Kuwait	ME-SA/PanAsia-2/QOM-15
IRN/27/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/29/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
TUR/96/2016*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/QOM-15
IRN/26/2015	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/16/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/15/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/6/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
AFG/31/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/13/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/5/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/4/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/12/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/65/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/25/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09

continued on next page

label	accession	host(s)	lab	country	taxonomic information
AFG/19/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/45/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/44/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/42/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/43/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/46/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/23/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/66/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/38/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/31/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/35/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/24/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
AFG/28/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/49/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/5/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/22/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/32/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/53/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/1/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/2/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/22/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/19/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/37/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/52/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/36/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/27/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/11/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/30/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/33/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/21/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/40/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/109/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/24/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/26/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/27/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/25/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/97/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/67/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/29/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/93/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/23/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-10
IRN/2/2013	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/21/2012	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/77/2011	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/62/2011	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
SAU/1/2009	n/a	cattle	WRLFMD	Saudi Arabia	ME-SA/PanAsia-2/FAR-09
SAU/2/2009	n/a	cattle	WRLFMD	Saudi Arabia	ME-SA/PanAsia-2/FAR-09
IRN/1/2010	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
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/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/56/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/11/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/25/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
AFG/43/2007	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2
AFG/42/2007	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2
AFG/45/2007	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2
NEP/1/2015	n/a	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available