

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

Genotyping Report

FMDV serotype: O
Country: Israel
Year: 2018
Batch: WRLMEG/2018/00018
No. of sequences: 2
Report date: 10th April 2018
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska

This report is prepared on behalf of the Kimron Veterinary Institute (Beit Dagon, Hamerkaz, Israel) and covers VP1 sequences submitted to the WRLFMD on 10 April 2018



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

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Virus sample name:	Gazit/317556-110/ISR/2018
Sender reference:	Gazit 317556-110
Location of origin:	Gazit kibbutz, southern Galilee
Country of origin:	Israel
Date of collection:	2018
Host species:	cattle
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	QOM-15
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:	10/04/2018
Last updated:	10/04/2018
VIBASys IDs: sample 36249, genome 36250, sequence viba_36251, sequencing info 36252	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36255	Gazit/317556-470/ISR/2018	cattle	100.0	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_23736	KUW/1/2016	cattle	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_27681	IRN/15/2016	sheep	97.9	0	O	ME-SA	PanAsia-2	QOM-15
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_27677	IRN/13/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27693	IRN/18/2016	sheep	97.8	0	O	ME-SA	PanAsia-2	QOM-15
viba_27701	IRN/21/2016	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	97.3	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	93.8	0	O	ME-SA	PanAsia-2	BAL-09
viba_766	IRN/31/2009	cattle	92.4	0	O	ME-SA	PanAsia-2	FAR-09
viba_650	IRN/8/2005	ovine	92.1	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		91.2	0	O	ME-SA	PanAsia-2	TER-08
viba_850	NEP/1/2015	cattle	91.0	1	O	ME-SA	PanAsia-2	KAT-15
viba_354	PAK/16/2010	cattle	90.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	89.7	0	O	ME-SA	PanAsia	

Virus sample name:	Gazit/317556-470/ISR/2018
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Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	10/04/2018
Last updated:	10/04/2018
VIBASys IDs: sample 36253, genome 36254, sequence viba_36255, sequencing info 36256	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_36251	Gazit/317556-110/ISR/2018	cattle	100.0	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_23736	KUW/1/2016	cattle	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_27681	IRN/15/2016	sheep	97.9	0	O	ME-SA	PanAsia-2	QOM-15
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_27677	IRN/13/2016	cattle	97.9	0	O	ME-SA	PanAsia-2	QOM-15
viba_27693	IRN/18/2016	sheep	97.8	0	O	ME-SA	PanAsia-2	QOM-15
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viba_860	IRN/6/2015	cattle	97.3	0	O	ME-SA	PanAsia-2	QOM-15
viba_666	IRN/18/2010	cattle	93.8	0	O	ME-SA	PanAsia-2	BAL-09
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viba_650	IRN/8/2005	ovine	92.1	0	O	ME-SA	PanAsia-2	
viba_719	IRN/88/2009		91.5	0	O	ME-SA	PanAsia-2	ANT-10
viba_491	TUR/257/2008		91.2	0	O	ME-SA	PanAsia-2	TER-08
viba_850	NEP/1/2015	cattle	91.0	1	O	ME-SA	PanAsia-2	KAT-15
viba_354	PAK/16/2010	cattle	90.7	0	O	ME-SA	PanAsia-2	PUN-10
viba_505	TUR/264/2009		90.2	0	O	ME-SA	PanAsia-2	SAN-09
viba_285	UKG/35/2001	porcine	89.7	0	O	ME-SA	PanAsia	

Report on FMDV O in Israel in 2018

Batch: WRLMEG/2018/00018



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2018/00018-Israel-O (2 sequences)
Sequence database set:	allseqs_O (3749 sequences)
Prototype sequence set:	!prototypes_O (48 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:	reflabs-1.1.2

Sequences in the Phylogenetic Tree

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

label	accession	host(s)	lab	country	taxonomic information
Gazit/317556-110/ISR/2018*	n/a	cattle	KVI	Israel	ME-SA/PanAsia-2/QOM-15
Gazit/317556-470/ISR/2018*	n/a	cattle	KVI	Israel	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
PAK/34/2015	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/QOM-15
IRN/12/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/10/2016	n/a	sheep	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/19/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2016	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/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
KUW/4/2016	n/a	cattle	WRLFMD	Kuwait	ME-SA/PanAsia-2/QOM-15
IRN/13/2016	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
KUW/1/2016	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/15/2016	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/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/15/2015	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/16/2015	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
TUR/276/2017.519*	n/a	n/a	FMDI	Turkey	ME-SA/PanAsia-2/QOM-15
Zh/sul1/IRQ/2016*	KY412559	n/a	Veterinary Directorate of Sulaimani	Iraq	ME-SA/PanAsia-2/QOM-15
Zh/sul2/IRQ/2016*	KY412560	n/a	Veterinary Directorate of Sulaimani	Iraq	ME-SA/PanAsia-2/QOM-15

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label	accession	host(s)	lab	country	taxonomic information
AFG/31/2010	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/5/2010	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/12/2010	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/19/2009	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
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/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/65/2009	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/97/2010	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/53/2010	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/67/2009	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/38/2009	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/19/2010	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/31/2009	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/11/2010	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/37/2009	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
AFG/32/2009	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
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
AFG/36/2009	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/22/2009	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/35/2009	n/a	n/a	WRLFMD	Afghanistan	ME-SA/PanAsia-2/BAL-09
AFG/28/2009	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/24/2010	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/23/2010	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/49/2009	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/66/2009	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
PAK/50/2007	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
TUR/264/2009*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/SAN-09
TUR/257/2008*	n/a	n/a	FMDI-Ankara	Turkey	ME-SA/PanAsia-2/TER-08
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/31/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/10/2007	n/a	goats	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/50/2006	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2
IRN/56/2006	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
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
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

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label	accession	host(s)	lab	country	taxonomic information
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number
n/a, not available