

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

Genotyping Report

FMDV serotype: SAT2
Country: Turkey
Year: 2023
Batch: WRLMEG/2023/00011
No. of sequences: 1
Report date: 16th March 2023
Report generated by: Nick Knowles
Report checked by: Don King

This report is prepared on behalf of the Şap Enstitüsü (Ankara, Turkey) and covers a VP1 sequence submitted to the WRLFMD on 16 March 2023.



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

email: reporting@pirbright.ac.uk

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Virus sample name:	TUR/79/2023
Sender reference:	SAT2/TUR/79/2023
Location of origin:	Tuzluca, Igdır Province
Country of origin:	Turkey
Date of collection:	03/03/2023
Host species:	cattle
Serotype:	SAT2
Topotype:	XIV
Lineage:	
Sublineage:	
Sequence length:	642
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	16/03/2023
Last updated:	16/03/2023
VIBASys IDs: sample 52655, genome 52656, sequence viba_52657, sequencing info 52658	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_52577	IRQ/3/2023	cattle	99.5	0	SAT2	XIV		
viba_52597	IRQ/8/2023	cattle	99.5	0	SAT2	XIV		
viba_52593	IRQ/7/2023	cattle	99.5	0	SAT2	XIV		
viba_52581	IRQ/4/2023	cattle	99.4	0	SAT2	XIV		
viba_52565	IRQ/1/2022	water buffalo	99.4	0	SAT2	XIV		
viba_52471	S41/Nineveh/IRQ/2023	cattle	99.4	0	SAT2	XIV		
viba_52589	IRQ/6/2023	cattle	99.4	0	SAT2	XIV		
viba_52573	IRQ/3/2022	water buffalo	99.4	0	SAT2	XIV		
viba_52405	JOR/2023	cattle	99.4	0	SAT2	XIV		
viba_52601	IRQ/9/2023	water buffalo	99.4	0	SAT2	XIV		

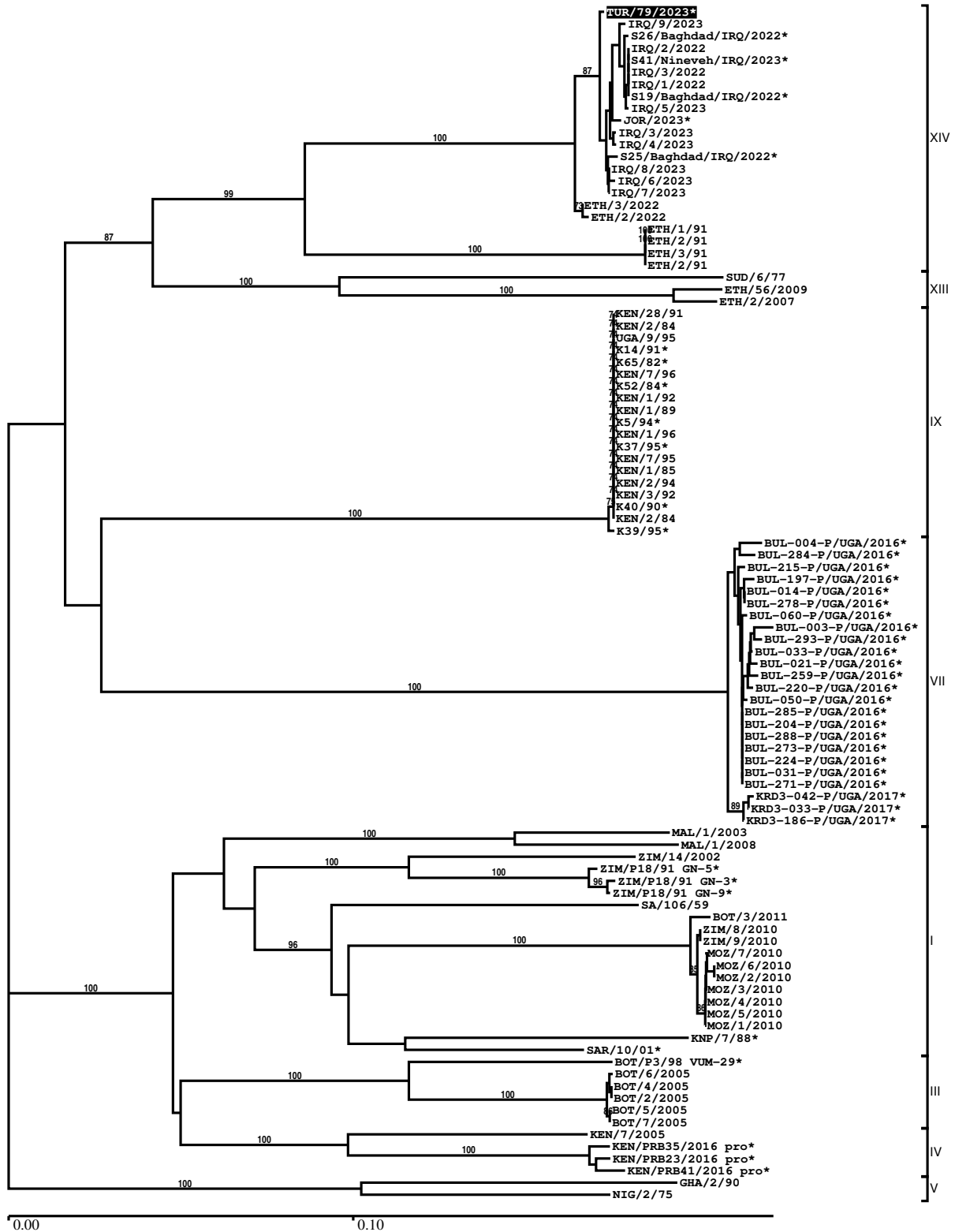
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_724	ETH/2/91	cattle	84.2	0	SAT2	XIV		
viba_470	KEN/2/84	bovine	75.1	0	SAT2	IX		
viba_500	NIG/2/75	bovine	75.0	0	SAT2	V		
viba_139	ETH/2/2007	cattle	74.8	0	SAT2	XIII		
viba_183	ZIM/14/2002	bovine	74.4	0	SAT2	I		
viba_111	MAL/1/2003	bovine	74.3	0	SAT2	I		
viba_752	SA/106/59		73.9	0	SAT2	I		
viba_451	BOT/P3/98 VUM-29	African buffalo	73.9	1	SAT2	III		
viba_728	GHA/2/90	bovine	73.7	0	SAT2	V		
viba_193	SUD/6/77		73.6	0	SAT2	XIII		

Report on FMDV SAT2 in Turkey in 2023

Batch: WRLMEG/2023/00011



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_SAT2
Query sequence set:	WRLMEG/2023/00011-Turkey-SAT2 (1 sequences)
Sequence database set:	allseqs_SAT2 (1134 sequences)
Prototype sequence set:	!prototypes_SAT2 (25 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	642
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/SAT2

label	accession	host(s)	lab	country	taxonomic information
TUR/79/2023*	n/a	cattle	FMDI	Turkey	XIV
IRQ/9/2023	n/a	water buffalo	WRLFMD	Iraq	XIV
S26/Baghdad/IRQ/2022*	n/a	water buffalo	FMDI	Iraq	XIV
IRQ/2/2022	n/a	water buffalo	WRLFMD	Iraq	XIV
S41/Nineveh/IRQ/2023*	n/a	cattle	FMDI	Iraq	XIV
IRQ/3/2022	n/a	water buffalo	WRLFMD	Iraq	XIV
IRQ/1/2022	n/a	water buffalo	WRLFMD	Iraq	XIV
S19/Baghdad/IRQ/2022*	n/a	water buffalo	FMDI	Iraq	XIV
IRQ/5/2023	n/a	cattle	WRLFMD	Iraq	XIV
JOR/2023*	n/a	cattle	JUST	Jordan	XIV
IRQ/3/2023	n/a	cattle	WRLFMD	Iraq	XIV
IRQ/4/2023	n/a	cattle	WRLFMD	Iraq	XIV
S25/Baghdad/IRQ/2022*	n/a	water buffalo	FMDI	Iraq	XIV
IRQ/8/2023	n/a	cattle	WRLFMD	Iraq	XIV
IRQ/6/2023	n/a	cattle	WRLFMD	Iraq	XIV
IRQ/7/2023	n/a	cattle	WRLFMD	Iraq	XIV
ETH/3/2022	n/a	bovine	WRLFMD	Ethiopia	XIV
ETH/2/2022	n/a	bovine	WRLFMD	Ethiopia	XIV
ETH/1/91	FJ798158	cattle	WRLFMD	Ethiopia	XIV
ETH/2/91	FJ798159	cattle	WRLFMD	Ethiopia	XIV
ETH/3/91	FJ798160	cattle	WRLFMD	Ethiopia	XIV
ETH/2/91	AY343938	cattle	OVI	Ethiopia	XIV
SUD/6/77	AY343939	n/a	OVI	Sudan	XIII
ETH/56/2009	KF112943	cattle	WRLFMD	Ethiopia	XIII
ETH/2/2007	FJ798161	cattle	WRLFMD	Ethiopia	XIII
KEN/28/91	AY343948	n/a	OVI	Kenya	IX
KEN/2/84	n/a	bovine	WRLFMD	Kenya	IX
UGA/9/95	AY343967	n/a	OVI	Uganda	IX
K14/91*	HM623689	n/a	Makerere University	Kenya	IX
K65/82*	HM623680	n/a	Makerere University	Kenya	IX
KEN/7/96	AY343959	n/a	OVI	Kenya	IX
K52/84*	n/a	n/a	WRLFMD	Kenya	IX
KEN/1/92	AY343953	n/a	OVI	Kenya	IX
KEN/1/89	AY343947	n/a	OVI	Kenya	IX

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label	accession	host(s)	lab	country	taxonomic information
K5/94*	HM623692	n/a	Makerere University	Kenya	IX
KEN/1/96	AY343960	n/a	OVI	Kenya	IX
K37/95*	HM623695	n/a	Makerere University	Kenya	IX
KEN/7/95	AY343956	n/a	OVI	Kenya	IX
KEN/1/85	AY343942	n/a	OVI	Kenya	IX
KEN/2/94	AY343955	n/a	OVI	Kenya	IX
KEN/3/92	AY343951	n/a	OVI	Kenya	IX
K40/90*	HM623688	n/a	Makerere University	Kenya	IX
KEN/2/84	AY343941	bovine	OVI	Kenya	IX
K39/95*	HM623696	n/a	Makerere University	Kenya	IX
BUL-004-P/UGA/2016*	MH367457	cattle	PIADC	Uganda	VII
BUL-284-P/UGA/2016*	MH367462	cattle	PIADC	Uganda	VII
BUL-215-P/UGA/2016*	MH367452	cattle	PIADC	Uganda	VII
BUL-197-P/UGA/2016*	MH367451	cattle	PIADC	Uganda	VII
BUL-014-P/UGA/2016*	MH367448	cattle	PIADC	Uganda	VII
BUL-278-P/UGA/2016*	MH367464	cattle	PIADC	Uganda	VII
BUL-060-P/UGA/2016*	MH367458	cattle	PIADC	Uganda	VII
BUL-003-P/UGA/2016*	MH367445	cattle	PIADC	Uganda	VII
BUL-293-P/UGA/2016*	MH367454	cattle	PIADC	Uganda	VII
BUL-033-P/UGA/2016*	MH367450	cattle	PIADC	Uganda	VII
BUL-021-P/UGA/2016*	MH367442	cattle	PIADC	Uganda	VII
BUL-259-P/UGA/2016*	MH367459	cattle	PIADC	Uganda	VII
BUL-220-P/UGA/2016*	MH367449	cattle	PIADC	Uganda	VII
BUL-050-P/UGA/2016*	MH367446	cattle	PIADC	Uganda	VII
BUL-285-P/UGA/2016*	MH367460	cattle	PIADC	Uganda	VII
BUL-204-P/UGA/2016*	MH367453	cattle	PIADC	Uganda	VII
BUL-288-P/UGA/2016*	MH367461	cattle	PIADC	Uganda	VII
BUL-273-P/UGA/2016*	MH367463	cattle	PIADC	Uganda	VII
BUL-224-P/UGA/2016*	MH367447	cattle	PIADC	Uganda	VII
BUL-031-P/UGA/2016*	MH367444	cattle	PIADC	Uganda	VII
BUL-271-P/UGA/2016*	MH367466	cattle	PIADC	Uganda	VII
KRD3-042-P/UGA/2017*	MH367438	cattle	PIADC	Uganda	VII
KRD3-033-P/UGA/2017*	MH367437	cattle	PIADC	Uganda	VII
KRD3-186-P/UGA/2017*	MH367441	cattle	PIADC	Uganda	VII
MAL/1/2003	n/a	bovine	WRLFMD	Malawi	I
MAL/1/2008	n/a	cattle	WRLFMD	Malawi	I
ZIM/14/2002	KF219689	bovine	WRLFMD	Zimbabwe	I
ZIM/P18/91 GN-5*	n/a	African buffalo	WRLFMD	Zimbabwe	I
ZIM/P18/91 GN-3*	n/a	African buffalo	WRLFMD	Zimbabwe	I
ZIM/P18/91 GN-9*	n/a	African buffalo	WRLFMD	Zimbabwe	I
SA/106/59	AY593848	n/a	PIADC	South Africa (SA)	I
BOT/3/2011	n/a	cattle	WRLFMD	Botswana	I
ZIM/8/2010	n/a	bovine	WRLFMD	Zimbabwe	I
ZIM/9/2010	n/a	bovine	WRLFMD	Zimbabwe	I
MOZ/7/2010	n/a	n/a	WRLFMD	Mozambique	I
MOZ/6/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/2/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/3/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/4/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/5/2010	n/a	cattle	WRLFMD	Mozambique	I
MOZ/1/2010	n/a	cattle	WRLFMD	Mozambique	I
KNP/7/88*	AF367103	African buffalo	OVI	South Africa (KNP)	I
SAR/10/01*	AY442912	n/a	OVI	Republic of South Africa	I
BOT/P3/98 VUM-29*	AF367124	African buffalo	OVI	Botswana	III
BOT/6/2005	n/a	cattle	WRLFMD	Botswana	III
BOT/4/2005	n/a	cattle	WRLFMD	Botswana	III
BOT/2/2005	n/a	cattle	WRLFMD	Botswana	III
BOT/5/2005	n/a	cattle	WRLFMD	Botswana	III
BOT/7/2005	n/a	cattle	WRLFMD	Botswana	III
KEN/7/2005	n/a	cattle	WRLFMD	Kenya	IV

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label	accession	host(s)	lab	country	taxonomic information
KEN/PRB35/2016 pro*	MH882626	African buffalo	PIADC	Kenya	IV
KEN/PRB23/2016 pro*	MH882624	African buffalo	PIADC	Kenya	IV
KEN/PRB41/2016 pro*	MH882630	African buffalo	PIADC	Kenya	IV
GHA/2/90	AF479415	bovine	OVI	Ghana	V
NIG/2/75	AF367139	bovine	OVI	Nigeria	V

*, not a WRLFMD Reference Number

n/a, not available