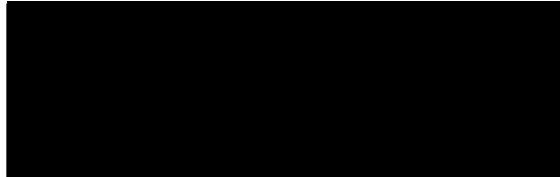




FMD Genotyping Report

Lab Reference WRL batch Number: WRLMEG/2024/000017

Sender Details:



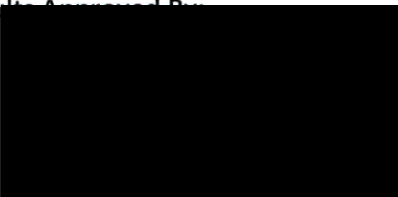
Date Received: 18/12/2024

Country of Origin*: Türkiye

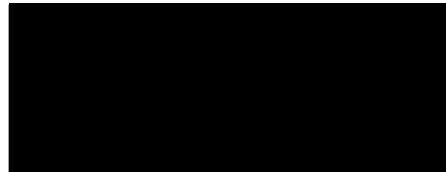
This report is prepared on behalf of the Şap Enstitüsü (Ankara, Türkiye) and covers VP1 sequences submitted to the WRLFMD on 18 December 2024.

Please note that all our phylogenetic trees can be accessed via the internet at: <http://www.wrlfmd.org/>

Results Approved By:



Official Stamp:



Date: 19/12/2024

WOAH Animal Health Information, Regional WOAH Delegate.

To help us improve the quality of our service, please send any suggestions or requests to the Reference Laboratory by email (reflabsfeedback@pirbright.ac.uk).

* Data supplied by the customer

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

Genotyping Report

FMDV serotype:	O
Country:	Türkiye
Year:	2024
Batch:	WRLMEG/2024/000017
No. of sequences:	2
Report date:	18th December 2024
Report generated by:	Nick Knowles
Report checked by:	Don King

This report is prepared on behalf of the Şap Enstitüsü (Ankara, Türkiye) and covers VP1 sequences submitted to the WRLFMD on 18 December 2024.



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

email: reporting@pirbright.ac.uk

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Virus sample name:	TUR/Igdir/2024
Sender reference:	O/TUR/Igdir/2024
Location of origin:	Aralik, Igdir province
Country of origin:	Türkiye
Date of collection:	25/11/2024
Host species:	sheep
Serotype:	O
Topotype:	ME-SA
Lineage:	SA-2018
Sublineage:	
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:	18/12/2024
Last updated:	18/12/2024
VIBASys IDs: sample 55661, genome 55662, sequence viba_55663, sequencing info 55664	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_55643	Otarod_2008/IRN/2023	cattle	98.7	0	O	ME-SA	SA-2018	
viba_53732	ICFMD/IND/273/2021	goat	97.9	0	O	ME-SA	SA-2018	
viba_52925	NEP/68/2021	cattle	97.9	0	O	ME-SA	SA-2018	
viba_53728	ICFMD/IND/270/2021	goat	97.9	0	O	ME-SA	SA-2018	
viba_53736	ICFMD/IND/275/2021	goat	97.9	0	O	ME-SA	SA-2018	
viba_53744	ICFMD/IND/281/2021	sheep	97.9	0	O	ME-SA	SA-2018	
viba_53764	ICFMD/IND/291/2021	goat	97.9	0	O	ME-SA	SA-2018	
viba_53892	ICFMD/IND/302/2021	sheep	97.9	0	O	ME-SA	SA-2018	
viba_52945	NEP/73/2021	cattle	97.9	0	O	ME-SA	SA-2018	
viba_53760	ICFMD/IND/333/2021	cattle	97.9	0	O	ME-SA	SA-2018	

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_47579	SRL/1/2019	cattle	93.2	0	O	ME-SA	SA-2018	
viba_766	IRN/31/2009	cattle	90.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_719	IRN/88/2009		90.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_666	IRN/18/2010	cattle	90.0	0	O	ME-SA	PanAsia-2	BAL-09
viba_27877	SRL/2/97	bovine	89.9	0	O	ME-SA	Srl-97	
viba_650	IRN/8/2005	ovine	89.9	0	O	ME-SA	PanAsia-2	
viba_9021	LAO/2/2006	cattle	89.6	0	O	ME-SA	PanAsia	
viba_860	IRN/6/2015	cattle	89.4	0	O	ME-SA	PanAsia-2	QOM-15
viba_285	UKG/35/2001	porcine	89.4	0	O	ME-SA	PanAsia	
viba_491	TUR/257/2008		89.3	0	O	ME-SA	PanAsia-2	TER-08

Virus sample name:	TUR/Gaziantep/2024
Sender reference:	O/TUR/Gaziantep/2024
Location of origin:	Oguzeli, Gaziantep province
Country of origin:	Turkiye
Date of collection:	29/11/2024
Host species:	sheep
Serotype:	O
Topotype:	ME-SA
Lineage:	PanAsia-2
Sublineage:	ANT-10
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:	18/12/2024
Last updated:	18/12/2024
VIBASys IDs: sample 55665, genome 55666, sequence viba_55667, sequencing info 55668	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_40311	VRI/CAMB/Bhakhar2/PUN/PAK/2018	cattle	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_40303	VRI/CAMB/Bhakhar1/PUN/PAK/2017	cattle	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_40319	VRI/CAMB/Bhakhar4/PUN/PAK/2018	cattle	99.4	0	O	ME-SA	PanAsia-2	ANT-10
viba_40307	VRI/CAMB/Bhakhar5/PUN/PAK/2017	water buffalo	99.2	0	O	ME-SA	PanAsia-2	ANT-10
viba_40327	VRI/CAMB/Jhang2/PUN/PAK/2018	cattle	99.1	0	O	ME-SA	PanAsia-2	ANT-10
viba_40291	VRI/CAMB/Lodrah3/PUN/PAK/2017	cattle	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_40287	VRI/CAMB/Lodrah2/PUN/PAK/2017	cattle	98.9	0	O	ME-SA	PanAsia-2	ANT-10
viba_40283	VRI/CAMB/Lodrah1/PUN/PAK/2017	cattle	97.8	0	O	ME-SA	PanAsia-2	ANT-10
viba_34937	PAK/7/2016	cattle	97.6	0	O	ME-SA	PanAsia-2	ANT-10
viba_39743	VRI/CAMB/Faisalabad1/PUN/PAK	cattle	97.5	0	O	ME-SA	PanAsia-2	ANT-10

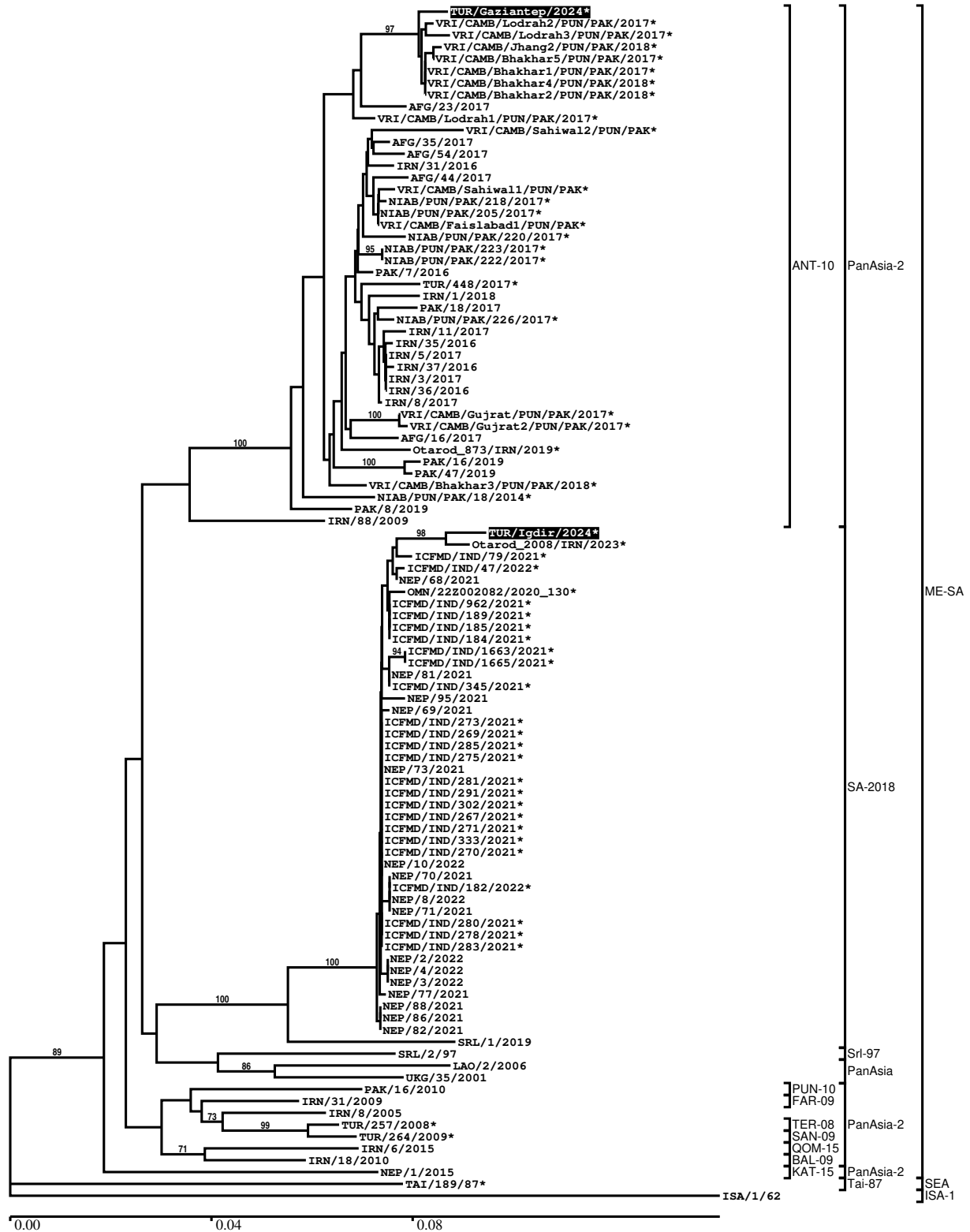
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_719	IRN/88/2009		92.0	0	O	ME-SA	PanAsia-2	ANT-10
viba_766	IRN/31/2009	cattle	90.7	0	O	ME-SA	PanAsia-2	FAR-09
viba_354	PAK/16/2010	cattle	89.9	0	O	ME-SA	PanAsia-2	PUN-10
viba_491	TUR/257/2008		89.7	0	O	ME-SA	PanAsia-2	TER-08
viba_666	IRN/18/2010	cattle	89.6	0	O	ME-SA	PanAsia-2	BAL-09
viba_650	IRN/8/2005	ovine	89.3	0	O	ME-SA	PanAsia-2	
viba_850	NEP/1/2015	cattle	89.1	1	O	ME-SA	PanAsia-2	KAT-15
viba_27877	SRL/2/97	bovine	89.1	0	O	ME-SA	Srl-97	
viba_285	UKG/35/2001	porcine	89.1	0	O	ME-SA	PanAsia	
viba_505	TUR/264/2009		89.1	0	O	ME-SA	PanAsia-2	SAN-09

Report on FMDV O in Turkiye in 2024

Batch: WRLMEG/2024/000017



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_O
Query sequence set:	WRLMEG/2024/000017-Turkiye-O (2 sequences)
Sequence database set:	allseqs_O (6275 sequences)
Prototype sequence set:	!prototypes_O (58 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:	13
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
TUR/Gaziantep/2024*	n/a	sheep	FMDI	Turkiye	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah2/PUN/PAK/2017*	MK342180	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah3/PUN/PAK/2017*	MK342181	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Jhang2/PUN/PAK/2018*	MK342190	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar5/PUN/PAK/2017*	MK342188	water buffalo	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar1/PUN/PAK/2017*	MK342184	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar4/PUN/PAK/2018*	MK342187	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar2/PUN/PAK/2018*	MK342185	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/23/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Lodrah1/PUN/PAK/2017*	MK342179	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Sahiwal2/PUN/PAK*	MK292146	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/35/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
AFG/54/2017	n/a	bovine	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
IRN/31/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
AFG/44/2017	n/a	bovine	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Sahiwal1/PUN/PAK*	MK292143	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/218/2017*	MH085204	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/205/2017*	MF140436	water buffalo	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Faislabad1/PUN/PAK*	MK292142	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10

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label	accession	host(s)	lab	country	taxonomic information
NIAB/PUN/PAK/220/2017*	MH085205	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/223/2017*	MH085207	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/222/2017*	MH085206	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/7/2016	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
TUR/448/2017*	n/a	sheep	FMDI	Turkiye	ME-SA/PanAsia-2/ANT-10
IRN/1/2018	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
PAK/18/2017	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/226/2017*	MH085208	n/a	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/11/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/35/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/5/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/37/2016	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/3/2017	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/36/2016	n/a	sheep	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
IRN/8/2017	n/a	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Gujrat/PUN/PAK/2017*	MK342182	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Gujrat2/PUN/PAK/2017*	MK342183	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
AFG/16/2017	n/a	cattle	WRLFMD	Afghanistan	ME-SA/PanAsia-2/ANT-10
Otarod_873/IRN/2019*	OQ682618	cattle	UNIV-TEHRAN	Iran	ME-SA/PanAsia-2/ANT-10
PAK/16/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/47/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
VRI/CAMB/Bhakhar3/PUN/PAK/2018*	MK342186	cattle	VRI-CAMB	Pakistan	ME-SA/PanAsia-2/ANT-10
NIAB/PUN/PAK/18/2014*	MF374991	cattle	NIAB	Pakistan	ME-SA/PanAsia-2/ANT-10
PAK/8/2019	n/a	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/ANT-10
IRN/88/2009	KY091282	n/a	WRLFMD	Iran	ME-SA/PanAsia-2/ANT-10
TUR/Igdir/2024*	n/a	sheep	FMDI	Turkiye	ME-SA/SA-2018
Otarod_2008/IRN/2023*	OR991332	cattle	UNIV-TEHRAN	Iran	ME-SA/SA-2018
ICFMD/IND/79/2021*	OQ847005	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/47/2022*	OQ847051	n/a	ICAR-DFMD	India	ME-SA/SA-2018
NEP/68/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
OMN/22Z002082/2020_130*	n/a	cattle	ANSES	Oman	ME-SA/SA-2018
ICFMD/IND/962/2021*	OQ847043	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/189/2021*	OQ847007	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/185/2021*	OQ847006	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/184/2021*	OQ846960	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/1663/2021*	OQ847047	cattle	ICAR-DFMD	India	ME-SA/SA-2018

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label	accession	host(s)	lab	country	taxonomic information
ICFMD/IND/1665/2021*	OQ847049	cattle	ICAR-DFMD	India	ME-SA/SA-2018
NEP/81/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
ICFMD/IND/345/2021*	OQ846954	cattle	ICAR-DFMD	India	ME-SA/SA-2018
NEP/95/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/69/2021	n/a	n/a	WRLFMD	Nepal	ME-SA/SA-2018
ICFMD/IND/273/2021*	OQ847014	goat	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/269/2021*	OQ847012	goat	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/285/2021*	OQ847019	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/275/2021*	OQ847015	goat	ICAR-DFMD	India	ME-SA/SA-2018
NEP/73/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
ICFMD/IND/281/2021*	OQ847017	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/291/2021*	OQ846955	goat	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/302/2021*	OQ846956	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/267/2021*	OQ847011	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/271/2021*	OQ846958	goat	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/333/2021*	OQ847022	cattle	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/270/2021*	OQ847013	goat	ICAR-DFMD	India	ME-SA/SA-2018
NEP/10/2022	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/70/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
ICFMD/IND/182/2022*	OQ847053	cattle	ICAR-DFMD	India	ME-SA/SA-2018
NEP/8/2022	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/71/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
ICFMD/IND/280/2021*	OQ846957	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/278/2021*	OQ847016	sheep	ICAR-DFMD	India	ME-SA/SA-2018
ICFMD/IND/283/2021*	OQ847018	goat	ICAR-DFMD	India	ME-SA/SA-2018
NEP/2/2022	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/4/2022	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/3/2022	n/a	goat	WRLFMD	Nepal	ME-SA/SA-2018
NEP/77/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/88/2021	n/a	cattle	WRLFMD	Nepal	ME-SA/SA-2018
NEP/86/2021	n/a	n/a	WRLFMD	Nepal	ME-SA/SA-2018
NEP/82/2021	n/a	water buffalo	WRLFMD	Nepal	ME-SA/SA-2018
SRL/1/2019	n/a	cattle	WRLFMD	Sri Lanka	ME-SA/SA-2018
SRL/2/97	AJ303531	bovine	WRLFMD	Sri Lanka	ME-SA/Sri-97
LAO/2/2006	EU667451	cattle	WRLFMD	Laos	ME-SA/PanAsia
UKG/35/2001	AJ539141	porcine	PIADC	United Kingdom	ME-SA/PanAsia
PAK/16/2010	KY091285	cattle	WRLFMD	Pakistan	ME-SA/PanAsia-2/PUN-10
IRN/31/2009	KY091284	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/FAR-09
IRN/8/2005	KY091281	ovine	WRLFMD	Iran	ME-SA/PanAsia-2
TUR/257/2008*	n/a	n/a	FMDI-Ankara	Turkiye	ME-SA/PanAsia-2/TER-08
TUR/264/2009*	n/a	n/a	FMDI-Ankara	Turkiye	ME-SA/PanAsia-2/SAN-09
IRN/6/2015	MN276044	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/QOM-15
IRN/18/2010	KY091283	cattle	WRLFMD	Iran	ME-SA/PanAsia-2/BAL-09
NEP/1/2015	MN276045	cattle	WRLFMD	Nepal	ME-SA/PanAsia-2/KAT-15

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label	accession	host(s)	lab	country	taxonomic information
TAI/189/87*	KY091288	bovine	TRRL	Thailand	SEA/Tai-87
ISA/1/62	AJ303500	n/a	WRLFMD	Indonesia	ISA-1

*, not a WRLFMD Reference Number

n/a, not available