

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

Genotyping Report

FMDV serotype: Asia1
Country: Bangladesh
Year: 2018
Batch: WRLMEG/2019/00041
No. of sequences: 2
Report date: 21st August 2019
Report generated by: Nick Knowles
Report checked by: Antonello Di Nardo



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

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Virus sample name:	BAN/DH/Sa-318/2018
Sender reference:	BAN/DH/Sa-318/2018
Location of origin:	Dhaka
Country of origin:	Bangladesh
Date of collection:	24/01/2018
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	G-IX
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	n/a
Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	21/08/2019
Last updated:	21/08/2019
VIBASys IDs: sample 42636, genome 42638, sequence viba_42639, sequencing info 42640	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_42643	BAN/DH/Sa-319/2018	cattle	99.7	0	Asia1	ASIA	G-IX	
viba_35797	NEP/46/2017	cattle	99.0	0	Asia1	ASIA	G-IX	
viba_35773	NEP/38/2017	cattle	99.0	0	Asia1	ASIA	G-IX	
viba_35785	NEP/43/2017	cattle	99.0	0	Asia1	ASIA	G-IX	
viba_35793	NEP/45/2017	cattle	99.0	0	Asia1	ASIA	G-IX	
viba_35789	NEP/44/2017	cattle	99.0	0	Asia1	ASIA	G-IX	
viba_35769	NEP/37/2017	cattle	98.9	0	Asia1	ASIA	G-IX	
viba_35777	NEP/39/2017	cattle	98.9	0	Asia1	ASIA	G-IX	
viba_35781	NEP/42/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_9384	IND 12/07	cattle	92.0	0	Asia1	ASIA	G-VIII	

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_35781	NEP/42/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_12154	BAR/8/2009	cattle	90.7	0	Asia1	ASIA	G-VIII	
viba_161	IND/14/95	bovine	89.5	0	Asia1	ASIA		
viba_775	IRN/10/2004	cattle	89.3	0	Asia1	ASIA	G-VIb	
viba_385	IND/762/2003	bovine	88.6	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.8	0	Asia1	ASIA		
viba_297	IND/63/72		86.1	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.9	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.7	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.8	0	Asia1	ASIA	Sindh-08	

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Sublineage:	
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Harvest date of material:	n/a
Primers:	n/a
Received for sequencing:	n/a
Created:	21/08/2019
Last updated:	21/08/2019
VIBASys IDs: sample 42641, genome 42642, sequence viba_42643, sequencing info 42644	

Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_42639	BAN/DH/Sa-318/2018	cattle	99.7	0	Asia1	ASIA	G-IX	
viba_35797	NEP/46/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_35773	NEP/38/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_35785	NEP/43/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_35793	NEP/45/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_35789	NEP/44/2017	cattle	98.7	0	Asia1	ASIA	G-IX	
viba_35769	NEP/37/2017	cattle	98.6	0	Asia1	ASIA	G-IX	
viba_35777	NEP/39/2017	cattle	98.6	0	Asia1	ASIA	G-IX	
viba_35781	NEP/42/2017	cattle	98.4	0	Asia1	ASIA	G-IX	
viba_19564	IND/120/2012	water buffalo	91.9	0	Asia1	ASIA	G-VIII	

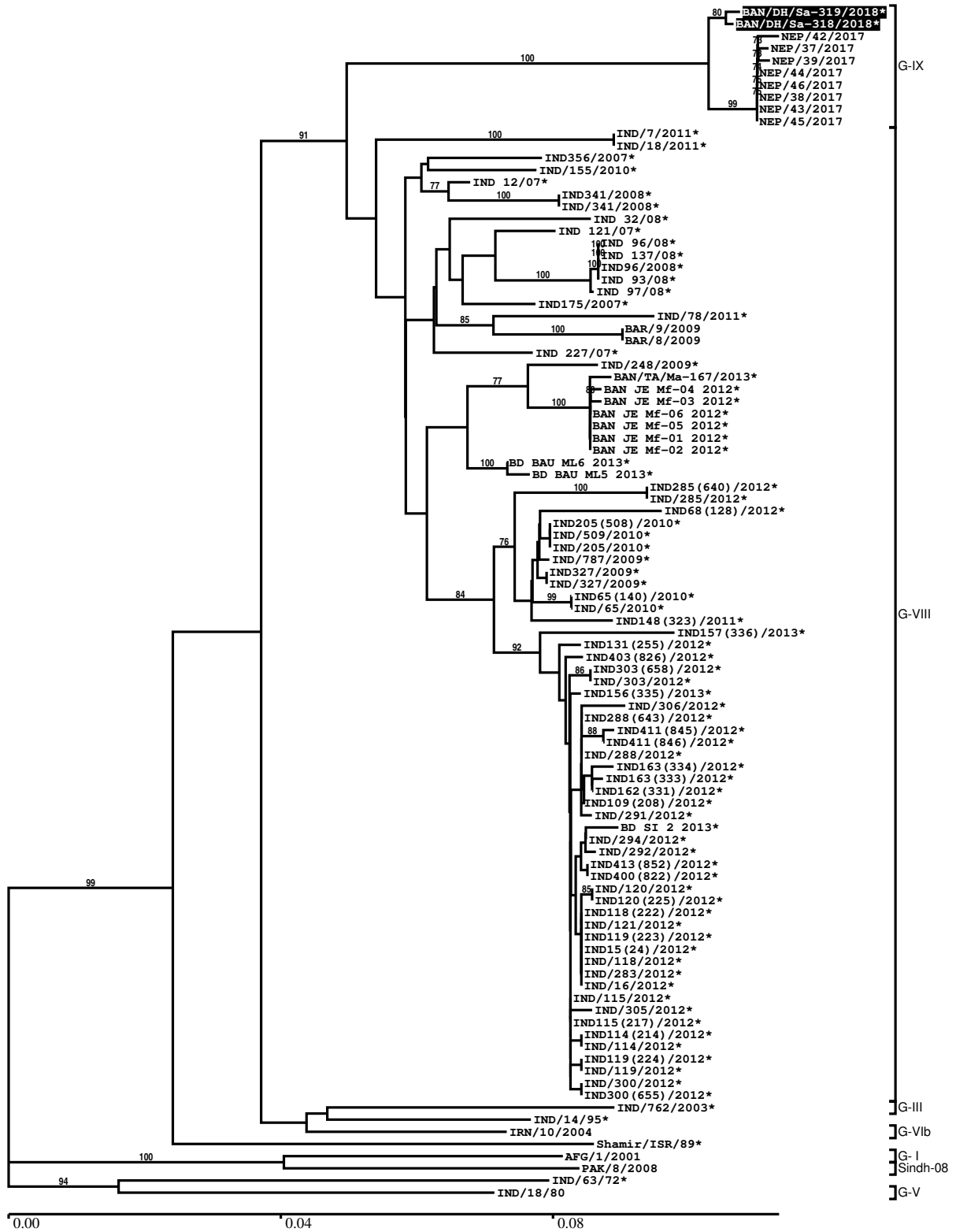
Most Closely Related Prototype Sequences

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

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35781	NEP/42/2017	cattle	98.4	0	Asia1	ASIA	G-IX	
viba_12154	BAR/8/2009	cattle	90.4	0	Asia1	ASIA	G-VIII	
viba_161	IND/14/95	bovine	89.2	0	Asia1	ASIA		
viba_775	IRN/10/2004	cattle	89.0	0	Asia1	ASIA	G-VIb	
viba_385	IND/762/2003	bovine	88.3	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.6	0	Asia1	ASIA		
viba_297	IND/63/72		85.9	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.7	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.5	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.9	0	Asia1	ASIA	Sindh-08	

Report on FMDV Asia1 in Bangladesh in 2018

Batch: WRLMEG/2019/00041



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor:	vp1_Asia1
Query sequence set:	WRLMEG/2019/00041-Bangladesh-Asia1 (2 sequences)
Sequence database set:	allseqs_Asia1 (691 sequences)
Prototype sequence set:	!prototypes_Asia1 (13 sequences)
Number of related sequences reported:	10
Minimal VP1 subsequence match length	600
Sequence alignment method:	muscle (default parameters)
Sequence alignment length:	627
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/Asia1/ASIA

label	accession	host(s)	lab	country	taxonomic information
BAN/DH/Sa-319/2018*	MH457187	cattle	UNIV-DHAKA	Bangladesh	G-IX
BAN/DH/Sa-318/2018*	MH457186	cattle	UNIV-DHAKA	Bangladesh	G-IX
NEP/42/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/37/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/39/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/44/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/46/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/38/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/43/2017	n/a	cattle	WRLFMD	Nepal	G-IX
NEP/45/2017	n/a	cattle	WRLFMD	Nepal	G-IX
IND/7/2011*	KF570659	cattle	PD-FMD	India	G-VIII
IND/18/2011*	JN247567	cattle	PD-FMD	India	G-VIII
IND356/2007*	KT153322	cattle	PD-FMD	India	G-VIII
IND/155/2010*	JN247565	cattle	PD-FMD	India	G-VIII
IND 12/07*	HQ224553	cattle	PD-FMD	India	G-VIII
IND341/2008*	KT153324	cattle	PD-FMD	India	G-VIII
IND/341/2008*	KF570653	cattle	PD-FMD	India	G-VIII
IND 32/08*	HQ224556	cattle	PD-FMD	India	G-VIII
IND 121/07*	HQ224554	cattle	PD-FMD	India	G-VIII
IND 96/08*	HQ224559	cattle	PD-FMD	India	G-VIII
IND 137/08*	HQ224561	cattle	PD-FMD	India	G-VIII
IND96/2008*	KT153323	cattle	PD-FMD	India	G-VIII
IND 93/08*	HQ224557	cattle	PD-FMD	India	G-VIII
IND 97/08*	HQ224560	cattle	PD-FMD	India	G-VIII
IND175/2007*	KT153321	cattle	PD-FMD	India	G-VIII
IND/78/2011*	KF570660	cattle	PD-FMD	India	G-VIII
BAR/9/2009	n/a	cattle	WRLFMD	Bahrain	G-VIII
BAR/8/2009	MG603264	cattle	WRLFMD	Bahrain	G-VIII
IND 227/07*	HQ224555	cattle	PD-FMD	India	G-VIII
IND/248/2009*	KF570654	cattle	PD-FMD	India	G-VIII
BAN/TA/Ma-167/2013*	MF782478	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-04 2012*	KJ175173	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-03 2012*	KJ175172	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-06 2012*	KJ175175	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-05 2012*	KJ175174	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-01 2012*	KJ175170	cattle	UNIV-DHAKA	Bangladesh	G-VIII

continued on next page

label	accession	host(s)	lab	country	taxonomic information
BAN JE Mf-02 2012*	KJ175171	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BD BAU ML6 2013*	KU159762	cattle	BAU	Bangladesh	G-VIII
BD BAU ML5 2013*	KU159763	cattle	BAU	Bangladesh	G-VIII
IND285(640)/2012*	KT153345	cattle	PD-FMD	India	G-VIII
IND/285/2012*	KF570676	cattle	PD-FMD	India	G-VIII
IND68(128)/2012*	KT153341	cattle	PD-FMD	India	G-VIII
IND205(508)/2010*	KT153327	cattle	PD-FMD	India	G-VIII
IND/509/2010*	JN247566	cattle	PD-FMD	India	G-VIII
IND/205/2010*	KF570658	cattle	PD-FMD	India	G-VIII
IND/787/2009*	KF570656	cattle	PD-FMD	India	G-VIII
IND327/2009*	KT153325	cattle	PD-FMD	India	G-VIII
IND/327/2009*	KF570655	cattle	PD-FMD	India	G-VIII
IND65(140)/2010*	KT153326	cattle	PD-FMD	India	G-VIII
IND/65/2010*	KF570657	cattle	PD-FMD	India	G-VIII
IND148(323)/2011*	KT153340	cattle	PD-FMD	India	G-VIII
IND157(336)/2013*	KT153368	cattle	PD-FMD	India	G-VIII
IND131(255)/2012*	KT153362	cattle	PD-FMD	India	G-VIII
IND403(826)/2012*	KT153350	cattle	PD-FMD	India	G-VIII
IND303(658)/2012*	KT153348	cattle	PD-FMD	India	G-VIII
IND/303/2012*	KF570682	cattle	PD-FMD	India	G-VIII
IND156(335)/2013*	KT153367	cattle	PD-FMD	India	G-VIII
IND/306/2012*	KF570684	cattle	PD-FMD	India	G-VIII
IND288(643)/2012*	KT153346	cattle	PD-FMD	India	G-VIII
IND411(845)/2012*	KT153352	cattle	PD-FMD	India	G-VIII
IND411(846)/2012*	KT153351	cattle	PD-FMD	India	G-VIII
IND/288/2012*	KF570677	cattle	PD-FMD	India	G-VIII
IND163(334)/2012*	KT153355	cattle	PD-FMD	India	G-VIII
IND163(333)/2012*	KT153344	cattle	PD-FMD	India	G-VIII
IND162(331)/2012*	KT153343	cattle	PD-FMD	India	G-VIII
IND109(208)/2012*	KT153365	water buffalo	PD-FMD	India	G-VIII
IND/291/2012*	KF570678	cattle	PD-FMD	India	G-VIII
BD SI 2 2013*	KR869774	cattle	BAU	Bangladesh	G-VIII
IND/294/2012*	KF570680	cattle	PD-FMD	India	G-VIII
IND/292/2012*	KF570679	cattle	PD-FMD	India	G-VIII
IND413(852)/2012*	KT153354	cattle	PD-FMD	India	G-VIII
IND400(822)/2012*	KT153349	cattle	PD-FMD	India	G-VIII
IND/120/2012*	KF570672	water buffalo	PD-FMD	India	G-VIII
IND120(225)/2012*	KT153357	water buffalo	PD-FMD	India	G-VIII
IND118(222)/2012*	KT153358	cattle	PD-FMD	India	G-VIII
IND/121/2012*	KF570673	cattle	PD-FMD	India	G-VIII
IND119(223)/2012*	KT153342	cattle	PD-FMD	India	G-VIII
IND15(24)/2012*	KT153363	cattle	PD-FMD	India	G-VIII
IND/118/2012*	KF570670	cattle	PD-FMD	India	G-VIII
IND/283/2012*	KF570675	cattle	PD-FMD	India	G-VIII
IND/16/2012*	KF570666	cattle	PD-FMD	India	G-VIII
IND/115/2012*	KF570669	water buffalo	PD-FMD	India	G-VIII
IND/305/2012*	KF570683	cattle	PD-FMD	India	G-VIII
IND115(217)/2012*	KT153359	cattle	PD-FMD	India	G-VIII
IND114(214)/2012*	KT153361	cattle	PD-FMD	India	G-VIII
IND/114/2012*	KF570668	cattle	PD-FMD	India	G-VIII
IND119(224)/2012*	KT153356	cattle	PD-FMD	India	G-VIII
IND/119/2012*	KF570671	cattle	PD-FMD	India	G-VIII
IND/300/2012*	KF570681	cattle	PD-FMD	India	G-VIII
IND300(655)/2012*	KT153347	cattle	PD-FMD	India	G-VIII
IND/762/2003*	DQ101240	bovine	PD-FMD	India	G-III
IND/14/95*	AF390678	bovine	PD-FMD	India	G-VIII
IRN/10/2004	DQ121119	cattle	WRLFMD	Iran	G-VIb
Shamir/ISR/89*	n/a	bovine	BFAV	Israel	
AFG/1/2001	DQ121109	bovine	WRLFMD	Afghanistan	G- I
PAK/8/2008	KY091304	water buffalo	WRLFMD	Pakistan	Sindh-08
IND/63/72*	AY304994	n/a	IVRI-Bangalore	India	
IND/18/80	DQ121116	bovine	WRLFMD	India	G-V

*, not a WRLFMD Reference Number

n/a, not available