

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

## Genotyping Report

FMDV serotype: Asia1  
Country: Nepal  
Year: 2017  
Batch: WRLFMD/2018/00005  
No. of sequences: 8  
Report date: 8th February 2018  
Report generated by: Nick Knowles  
Report checked by: Kasia Bankowska



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

email: [reporting@pirbright.ac.uk](mailto:reporting@pirbright.ac.uk)

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Virus sample name:	NEP/37/2017
Sender reference:	1 Np FMD
Location of origin:	Kaski, Province No. 4
Country of origin:	Nepal
Date of collection:	19/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	31/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35767, genome 35768, sequence viba_35769, sequencing info 35770	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	99.8	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	99.8	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	99.8	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	99.8	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.7	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.5	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.5	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.5	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.4	0	Asia1	ASIA	G-VIII	

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_12154	BAR/8/2009	cattle	90.3	0	Asia1	ASIA	G-VIII	
viba_161	IND/14/95	bovine	89.1	0	Asia1	ASIA		
viba_775	IRN/10/2004	cattle	88.8	0	Asia1	ASIA	G-VIb	
viba_385	IND/762/2003	bovine	87.8	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.6	0	Asia1	ASIA		
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G-I	
viba_737	IND/18/80	bovine	85.1	0	Asia1	ASIA	G-V	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		

Virus sample name:	NEP/38/2017
Sender reference:	2 Np FMD
Location of origin:	Kaski, Province No. 4
Country of origin:	Nepal
Date of collection:	19/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	31/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35771, genome 35772, sequence viba_35773, sequencing info 35774	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	100.0	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	100.0	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	100.0	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	100.0	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.8	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.7	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.5	0	Asia1	ASIA	G-VIII	

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.0	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.8	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.3	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		

Virus sample name:	NEP/39/2017
Sender reference:	3 Np FMD
Location of origin:	Kaski, Province No. 4
Country of origin:	Nepal
Date of collection:	19/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	31/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35775, genome 35776, sequence viba_35777, sequencing info 35778	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	99.8	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	99.8	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	99.8	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	99.8	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	99.8	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.7	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.5	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.5	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.5	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.4	0	Asia1	ASIA	G-VIII	

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_12154	BAR/8/2009	cattle	90.3	0	Asia1	ASIA	G-VIII	
viba_161	IND/14/95	bovine	89.1	0	Asia1	ASIA		
viba_775	IRN/10/2004	cattle	88.8	0	Asia1	ASIA	G-VIb	
viba_385	IND/762/2003	bovine	87.8	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.0	0	Asia1	ASIA		
viba_297	IND/63/72		85.6	0	Asia1	ASIA		
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G-I	
viba_737	IND/18/80	bovine	85.1	0	Asia1	ASIA	G-V	
viba_206	PAK/8/2008	water buffalo	84.0	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.8	0	Asia1	ASIA		

Virus sample name:	NEP/42/2017
Sender reference:	6 Np FMD
Location of origin:	Kaski, Province No. 4
Country of origin:	Nepal
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	31/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35779, genome 35780, sequence viba_35781, sequencing info 35782	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	99.7	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	99.7	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	99.7	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	99.7	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	99.7	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.5	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.5	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.4	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.4	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.2	0	Asia1	ASIA	G-VIII	

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.7	0	Asia1	ASIA	G-VIb	
viba_385	IND/762/2003	bovine	87.8	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.8	0	Asia1	ASIA	G-V	
viba_297	IND/63/72		85.5	0	Asia1	ASIA		
viba_167	AFG/1/2001	bovine	85.2	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.6	0	Asia1	ASIA	Sindh-08	
viba_760	PAK/1/54		84.0	0	Asia1	ASIA		

Virus sample name:	NEP/43/2017
Sender reference:	7 Np FMD
Location of origin:	Chitwan, Province No. 3
Country of origin:	Nepal
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	31/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35783, genome 35784, sequence viba_35785, sequencing info 35786	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	100.0	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	100.0	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	100.0	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	100.0	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.8	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.7	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.5	0	Asia1	ASIA	G-VIII	

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.0	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.8	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.3	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		

Virus sample name:	NEP/44/2017
Sender reference:	8 Np FMD
Location of origin:	Chitwan, Province No. 3
Country of origin:	Nepal
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	01/02/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35787, genome 35788, sequence viba_35789, sequencing info 35790	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	100.0	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	100.0	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	100.0	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	100.0	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.8	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.7	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.5	0	Asia1	ASIA	G-VIII	

#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.0	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.8	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.3	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		

Virus sample name:	NEP/45/2017
Sender reference:	17 Np FMD
Location of origin:	Chitwan, Province No. 3
Country of origin:	Nepal
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	30/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35791, genome 35792, sequence viba_35793, sequencing info 35794	

### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35789	NEP/44/2017	cattle	100.0	0	Asia1	ASIA		
viba_35797	NEP/46/2017	cattle	100.0	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	100.0	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	100.0	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.8	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.7	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.5	0	Asia1	ASIA	G-VIII	

### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.0	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.8	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.3	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		



Virus sample name:	NEP/46/2017
Sender reference:	18 Np FMD
Location of origin:	Chitwan, Province No. 3
Country of origin:	Nepal
Date of collection:	27/12/2017
Host species:	cattle
Serotype:	Asia1
Topotype:	ASIA
Lineage:	
Sublineage:	
Sequence length:	627
Ambiguities:	0
Material submitted for sequencing:	BTy1
Harvest date of material:	30/01/2018
Primers:	As1-1C530F/EUR-2B52R; As1-1C613F/EUR-2B52R
Received for sequencing:	07/02/2018
Created:	08/02/2018
Last updated:	08/02/2018
VIBASys IDs: sample 35795, genome 35796, sequence viba_35797, sequencing info 35798	

#### Most Closely Related Sequences

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
viba_35793	NEP/45/2017	cattle	100.0	0	Asia1	ASIA		
viba_35789	NEP/44/2017	cattle	100.0	0	Asia1	ASIA		
viba_35785	NEP/43/2017	cattle	100.0	0	Asia1	ASIA		
viba_35773	NEP/38/2017	cattle	100.0	0	Asia1	ASIA		
viba_35769	NEP/37/2017	cattle	99.8	0	Asia1	ASIA		
viba_35777	NEP/39/2017	cattle	99.8	0	Asia1	ASIA		
viba_35781	NEP/42/2017	cattle	99.7	0	Asia1	ASIA		
viba_9384	IND 12/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_9392	IND 227/07	cattle	91.7	0	Asia1	ASIA	G-VIII	
viba_32720	IND120(225)/2012	water buffalo	91.5	0	Asia1	ASIA	G-VIII	

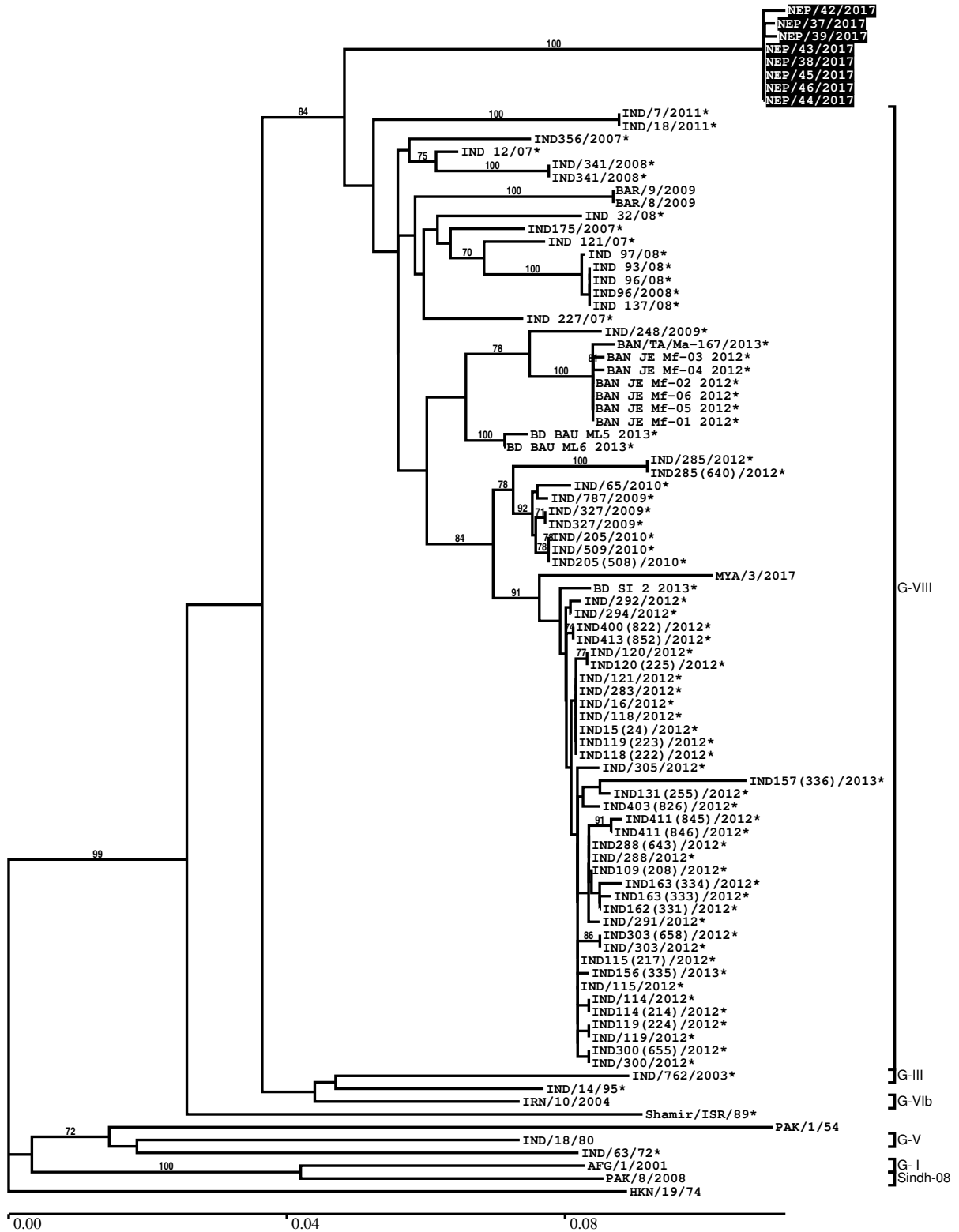
#### Most Closely Related Prototype Sequences

see [http://www.wrlfmd.org/fmd\\_genotyping/prototypes.htm](http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)

sequence	virus name	Host	% Id.	# Ambig.	serotype	topotype	lineage	sublineage
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	88.0	0	Asia1	ASIA	G-III	
viba_146	Shamir/ISR/89	bovine	86.1	0	Asia1	ASIA		
viba_297	IND/63/72		85.8	0	Asia1	ASIA		
viba_737	IND/18/80	bovine	85.3	0	Asia1	ASIA	G-V	
viba_167	AFG/1/2001	bovine	85.1	0	Asia1	ASIA	G- I	
viba_206	PAK/8/2008	water buffalo	84.2	0	Asia1	ASIA	Sindh-08	
viba_646	HKN/19/74	bovine	83.9	0	Asia1	ASIA		

Report on FMDV Asia1 in Nepal in 2017

Batch: WRLFMD/2018/00005



\*, not a WRLFMD Reference Number

## Analysis Parameters

VP1 subsequence extractor: vp1\_Asia1  
 Query sequence set: WRLFMD/2018/00005-Nepal-Asia1 (8 sequences)  
 Sequence database set: allseqs\_Asia1 (549 sequences)  
 Prototype sequence set: !prototypes\_Asia1 (12 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: 11  
 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
NEP/42/2017	n/a	cattle	WRLFMD	Nepal	
NEP/37/2017	n/a	cattle	WRLFMD	Nepal	
NEP/39/2017	n/a	cattle	WRLFMD	Nepal	
NEP/43/2017	n/a	cattle	WRLFMD	Nepal	
NEP/38/2017	n/a	cattle	WRLFMD	Nepal	
NEP/45/2017	n/a	cattle	WRLFMD	Nepal	
NEP/46/2017	n/a	cattle	WRLFMD	Nepal	
NEP/44/2017	n/a	cattle	WRLFMD	Nepal	
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 12/07*	HQ224553	cattle	PD-FMD	India	G-VIII
IND/341/2008*	KF570653	cattle	PD-FMD	India	G-VIII
IND341/2008*	KT153324	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 32/08*	HQ224556	cattle	PD-FMD	India	G-VIII
IND175/2007*	KT153321	cattle	PD-FMD	India	G-VIII
IND 121/07*	HQ224554	cattle	PD-FMD	India	G-VIII
IND 97/08*	HQ224560	cattle	PD-FMD	India	G-VIII
IND 93/08*	HQ224557	cattle	PD-FMD	India	G-VIII
IND 96/08*	HQ224559	cattle	PD-FMD	India	G-VIII
IND96/2008*	KT153323	cattle	PD-FMD	India	G-VIII
IND 137/08*	HQ224561	cattle	PD-FMD	India	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-03 2012*	KJ175172	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-04 2012*	KJ175173	cattle	UNIV-DHAKA	Bangladesh	G-VIII
BAN JE Mf-02 2012*	KJ175171	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
BD BAU ML5 2013*	KU159763	cattle	BAU	Bangladesh	G-VIII
BD BAU ML6 2013*	KU159762	cattle	BAU	Bangladesh	G-VIII
IND/285/2012*	KF570676	cattle	PD-FMD	India	G-VIII

*continued on next page*

label	accession	host(s)	lab	country	taxonomic information
IND285(640)/2012*	KT153345	cattle	PD-FMD	India	G-VIII
IND/65/2010*	KF570657	cattle	PD-FMD	India	G-VIII
IND/787/2009*	KF570656	cattle	PD-FMD	India	G-VIII
IND/327/2009*	KF570655	cattle	PD-FMD	India	G-VIII
IND327/2009*	KT153325	cattle	PD-FMD	India	G-VIII
IND/205/2010*	KF570658	cattle	PD-FMD	India	G-VIII
IND/509/2010*	JN247566	cattle	PD-FMD	India	G-VIII
IND205(508)/2010*	KT153327	cattle	PD-FMD	India	G-VIII
MYA/3/2017	MG603266	cattle	WRLFMD	Myanmar	G-VIII
BD SI 2 2013*	KR869774	cattle	BAU	Bangladesh	G-VIII
IND/292/2012*	KF570679	cattle	PD-FMD	India	G-VIII
IND/294/2012*	KF570680	cattle	PD-FMD	India	G-VIII
IND400(822)/2012*	KT153349	cattle	PD-FMD	India	G-VIII
IND413(852)/2012*	KT153354	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
IND/121/2012*	KF570673	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/118/2012*	KF570670	cattle	PD-FMD	India	G-VIII
IND15(24)/2012*	KT153363	cattle	PD-FMD	India	G-VIII
IND119(223)/2012*	KT153342	cattle	PD-FMD	India	G-VIII
IND118(222)/2012*	KT153358	cattle	PD-FMD	India	G-VIII
IND/305/2012*	KF570683	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
IND411(845)/2012*	KT153352	cattle	PD-FMD	India	G-VIII
IND411(846)/2012*	KT153351	cattle	PD-FMD	India	G-VIII
IND288(643)/2012*	KT153346	cattle	PD-FMD	India	G-VIII
IND/288/2012*	KF570677	cattle	PD-FMD	India	G-VIII
IND109(208)/2012*	KT153365	water buffalo	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
IND/291/2012*	KF570678	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
IND115(217)/2012*	KT153359	cattle	PD-FMD	India	G-VIII
IND156(335)/2013*	KT153367	cattle	PD-FMD	India	G-VIII
IND/115/2012*	KF570669	water buffalo	PD-FMD	India	G-VIII
IND/114/2012*	KF570668	cattle	PD-FMD	India	G-VIII
IND114(214)/2012*	KT153361	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
IND300(655)/2012*	KT153347	cattle	PD-FMD	India	G-VIII
IND/300/2012*	KF570681	cattle	PD-FMD	India	G-VIII
IND/762/2003*	DQ101240	bovine	PD-FMD	India	G-III
IND/14/95*	AF390678	bovine	PD-FMD	India	
IRN/10/2004	DQ121119	cattle	WRLFMD	Iran	G-VIb
Shamir/ISR/89*	n/a	bovine	BFAV	Israel	
PAK/1/54	AY593795	n/a	PIADC	Pakistan	
IND/18/80	DQ121116	bovine	WRLFMD	India	G-V
IND/63/72*	AY304994	n/a	IVRI-Bangalore	India	
AFG/1/2001	DQ121109	bovine	WRLFMD	Afghanistan	G- I
PAK/8/2008	KY091304	water buffalo	WRLFMD	Pakistan	Sindh-08
HKN/19/74	n/a	bovine	WRLFMD	Hong Kong SAR	

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n/a, not available