

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

Genotyping Report

Report Date for this Batch: 5 August 2010

FMDV type O

Country: Kenya

Period: 2009-2010

No. of isolates: 2

BATCH: WRLFMD/2010/00026



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FAO World Reference Laboratory for FMD Genotyping Report

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Serotype: O	Report date: 05/08/2010
WRLFMD Ref No: KEN/125/2009	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00026	Checked by: V. Mioulet
Sender Ref: K115/09	
Location: Nairobi, Kenya	Topotype: EA-1
Date collected: 17/09/2009	Genotype/strain: unnamed
Date received by WRLFMD: 10/06/2010	Sequence filename: KEN09125.SEQ
Date received for sequencing: 29/07/2010	Date sequence last updated: 04/08/2010
Species: Cattle	No. of Nt determined: 639
Material used: BHK1 BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 639
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2236
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 56 days
	Sequencing time: 7 days
Comments:	

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/KEN/62/2009	KEN09-62	639	639	0	100.00	0.00	EA-1	unnamed
2	O/KEN/63/2009	KEN09-63	639	639	0	100.00	0.00	EA-1	unnamed
3	O/KEN/64/2009	KEN09-64	639	639	0	100.00	0.00	EA-1	unnamed
4	O/KEN/66/2009	KEN09-66	639	639	0	100.00	0.00	EA-1	unnamed
5	O/KEN/67/2009	KEN09-67	639	639	0	100.00	0.00	EA-1	unnamed
6	O/K77/78* (DQ165072)	KEN78-77	639	638	0	99.84	0.16	EA-1	unnamed
7	O/KEN/2/95 (K10/95)(AJ303514)	KEN95-02	639	638	0	99.84	0.16	EA-1	unnamed
8	O/KEN/37/2008	KEN08-37	639	638	0	99.84	0.16	EA-1	unnamed
9	O/KEN/4/95 (K29/95)(AJ303515)	KEN95-04	639	638	0	99.84	0.16	EA-1	unnamed
10	O/KEN/5/95 (K36/95)(AJ303516)	KEN95-05	639	638	0	99.84	0.16	EA-1	unnamed
Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/K83/79* (AJ303511)	KEN79B83	638	608	1	95.30	4.70	EA-1	unnamed
2	O/UGA/5/96 (AJ296327)	UGA96-05	639	573	0	89.67	10.33	EA-1	unnamed
3	O/K40/84*	KEN84-40	639	568	0	88.89	11.11	EA-1	unnamed
4	O/IND/53/79 (AF292107)	IND79A53	639	562	0	87.95	12.05	ME-SA	unnamed
5	O/ETH/1/2007 (FJ798137)	ETH07-01	639	557	0	87.17	12.83	EA-3	unnamed
6	O/SUD/2/86 (DQ165075)	SUD86-02	639	555	0	86.85	13.15	EA-3	unnamed
7	O/IND/R2/75* (AF204276)	IND75--A	639	554	0	86.70	13.30	ME-SA	unnamed
8	O/IRN/61/2001 (DQ164896)	IRN01-61	638	550	1	86.21	13.79	ME-SA	Irn-2001
9	O/PAK/16/2003 (DQ165068)	PAK03-16	639	550	0	86.07	13.93	ME-SA	Pak-98
10	O/ETH/58/2005 (FJ798141)	ETH05-58	639	549	0	85.92	14.08	EA-4	unnamed

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v3.1

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Serotype: O	Report date: 05/08/2010
WRLFMD Ref No: KEN/100/2010	Reported by: N.J. Knowles
Batch No: WRLFMD/2010/00026	Checked by: V. Mioulet
Sender Ref: K72/10	
Location: Eldoret West, Kenya	Topotype: EA-4
Date collected: 28/04/2010	Genotype/strain: Unnamed
Date received by WRLFMD: 10/06/2010	Sequence filename: KEN10100.SEQ
Date received for sequencing: 29/07/2010	Date sequence last updated: 05/08/2010
Species: Cattle	No. of Nt determined: 642
Material used: BTy1	No. of ambiguities: 0
Region sequenced: VP1	Gene length: 642
RT-PCR primers: O-1C244F/EUR-2B52R	Total no. of comparisons: 2236
O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 600
	Total turn-around time: 56 days
	Sequencing time: 7 days

Comments: This is the first detection of the East Africa 4 (EA-4) topotype in Kenya.

Most Closely Related Viruses									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/UGA/9/98 (HM211072)	UGA98-09	642	584	0	90.97	9.03	EA-4	unnamed
2	O/UGA/10/98 (HM211073)	UGA98-10	642	581	0	90.50	9.50	EA-4	unnamed
3	O/UGA/17/98 (HM211075)	UGA98-17	642	581	0	90.50	9.50	EA-4	unnamed
4	O/UGA/15/98 (HM211074)	UGA98-15	642	579	0	90.19	9.81	EA-4	unnamed
5	O/ETH/59/2005 (FJ798142)	ETH05-59	642	572	0	89.10	10.90	EA-4	unnamed
6	O/ETH/60/2005 (FJ798143)	ETH05-60	642	572	0	89.10	10.90	EA-4	unnamed
7	O/ETH/58/2005 (FJ798141)	ETH05-58	642	571	0	88.94	11.06	EA-4	unnamed
8	O/UGA/9/74 (AY344630)	UGA74A09	639	568	0	88.89	11.11	EA-3	unnamed
9	O/UGA/12/73	UGA73-12	639	566	0	88.58	11.42	EA-4	unnamed
10	O/EGY/1/74	EGY74-01	639	563	0	88.11	11.89	EA-1	unnamed

Most Closely Related Reference Viruses									
(see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm)									
Pos.	Virus name	Filename	No. nt comp.	No. nt match.	No. of ambig.	% Id.	% Diff.	Topotype	Strain
1	O/UGA/17/98 (HM211075)	UGA98-17	642	581	0	90.50	9.50	EA-4	unnamed
2	O/ETH/58/2005 (FJ798141)	ETH05-58	642	571	0	88.94	11.06	EA-4	unnamed
3	O/K40/84*	KEN84-40	639	557	0	87.17	12.83	EA-1	unnamed
4	O/K83/79* (AJ303511)	KEN79B83	638	556	1	87.15	12.85	EA-1	unnamed
5	O/SUD/2/86 (DQ165075)	SUD86-02	639	553	0	86.54	13.46	EA-3	unnamed
6	O/ETH/1/2007 (FJ798137)	ETH07-01	639	552	0	86.38	13.62	EA-3	unnamed
7	O/ETH/3/2004 (FJ798109)	ETH04-03	639	550	0	86.07	13.93	EA-3	unnamed
8	O/IND/R2/75* (AF204276)	IND75--A	639	547	0	85.60	14.40	ME-SA	unnamed
9	O/UKG/35/2001 (AJ539141)	UKG01-35	639	546	0	85.45	14.55	ME-SA	PanAsia
10	O/UAE/4/2008	UAE08-04	636	543	0	85.38	14.62	ME-SA	Ind-2001c

nt, nucleotides

*, not a WRLFMD reference number

Assembled with Report Generator v3.1

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Report on FMDV O in Kenya in 2009-2010

Batch: WRLFMD/2010/00026

Software: MEGA 4.0

No. of Taxa : 279

Data File : n:\evd\meg\db\fmdv\o\KEN2010b.meg

Data Title : O Kenya 2009-2010

Data Type : Nucleotide (Coding)

Analysis : Phylogeny reconstruction

Tree Inference : =====

->Method : Neighbor-Joining

->Phylogeny Test and options : Bootstrap (1000 replicates; seed=64843)

Include Sites : =====

->Gaps/Missing Data : Pairwise Deletion

->Codon Positions : 1st+2nd+3rd+Noncoding

Substitution Model : =====

->Model : Nucleotide: Kimura 2-parameter

->Substitutions to Include : d: Transitions + Transversions

->Pattern among Lineages : Same (Homogeneous)

->Rates among sites : Uniform rates

No. of Sites : 642

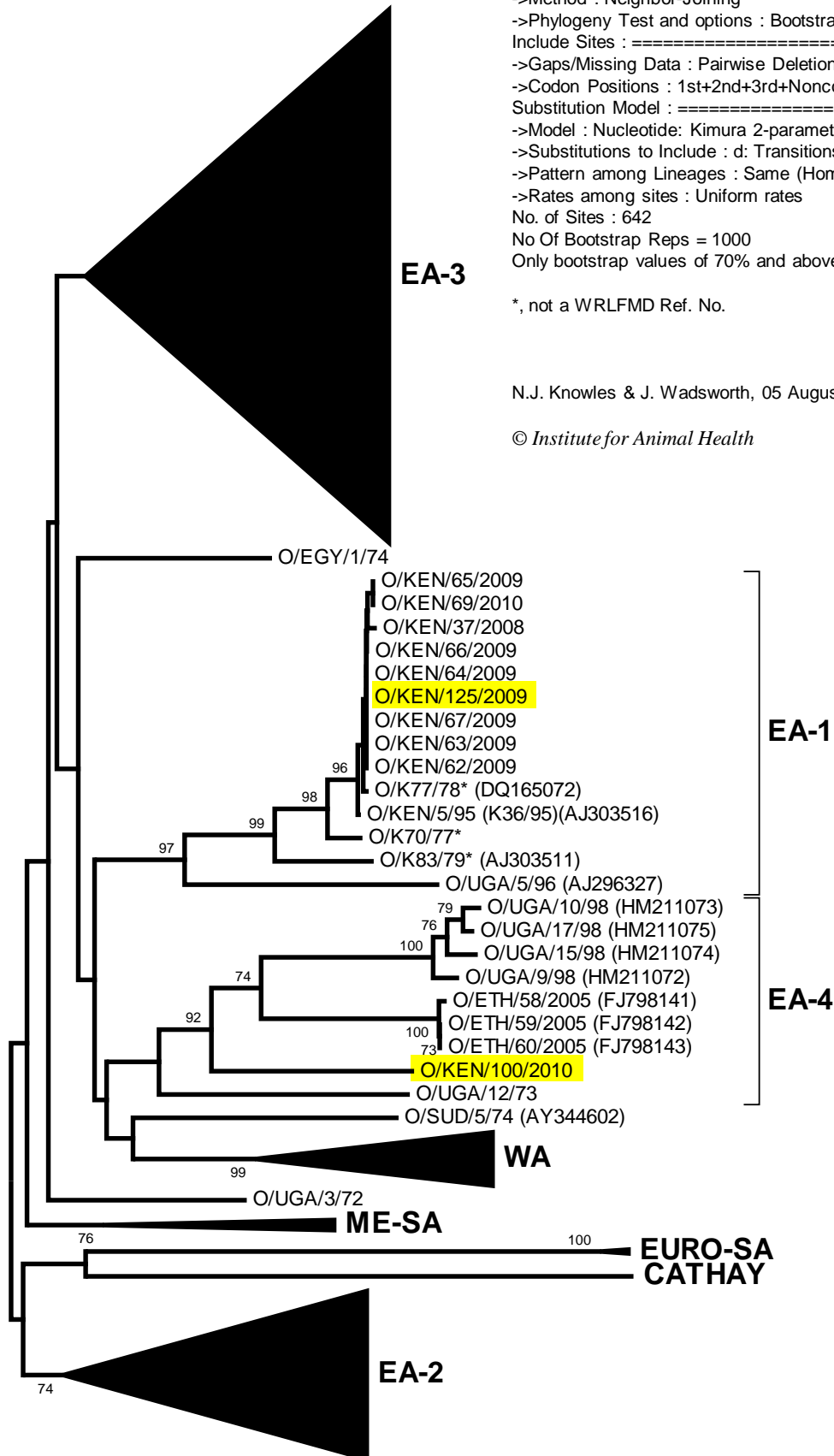
No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and above are shown

*, not a WRLFMD Ref. No.

N.J. Knowles & J. Wadsworth, 05 August 2010

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