

Molecular Epidemiology Report Form

IAH-P-EP-MEG-FOR-005-1

Page 1 of 1

Serotype: O WRL Ref No: KEN/26/2005 Sender Ref: K31/2005 Date collected: 27/05/2005 Date received by WRLFMD: 26/05/2006 Date received for sequencing: 07/06/2006 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C272F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 25/09/2006 Reported by: N.J. Knowles Checked by: D.P. King Topotype: EA-2 Genotype/strain: none designated Sequence filename: KEN05-26.SEQ Date sequence last updated: 04/07/2006 Total no. of comparisons: 1977 Min. no. of nt for comparison: 300 Total turn-around time: 122 days Sequencing time: 110 days																																																																																								
Comments:																																																																																									
Ten Most Closely Related Viruses																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Pos.</th> <th style="text-align: left;">Virus name</th> <th style="text-align: left;">Filename</th> <th style="text-align: center;">No. nt compared</th> <th style="text-align: center;">No. nt matched</th> <th style="text-align: center;">No. of ambiguities</th> <th style="text-align: center;">% Identity</th> <th style="text-align: center;">% Difference</th> </tr> </thead> <tbody> <tr><td>1</td><td>O/KEN/6/2005</td><td>KEN05-06</td><td style="text-align: center;">639</td><td style="text-align: center;">633</td><td style="text-align: center;">0</td><td style="text-align: center;">99.06</td><td style="text-align: center;">0.94</td></tr> <tr><td>2</td><td>O/KEN/30/2004</td><td>KEN04-30</td><td style="text-align: center;">639</td><td style="text-align: center;">632</td><td style="text-align: center;">0</td><td style="text-align: center;">98.9</td><td style="text-align: center;">1.1</td></tr> <tr><td>3</td><td>O/KEN/4/2005</td><td>KEN05-04</td><td style="text-align: center;">639</td><td style="text-align: center;">630</td><td style="text-align: center;">0</td><td style="text-align: center;">98.59</td><td style="text-align: center;">1.41</td></tr> <tr><td>4</td><td>O/KEN/7/2002</td><td>KEN02-07</td><td style="text-align: center;">639</td><td style="text-align: center;">624</td><td style="text-align: center;">0</td><td style="text-align: center;">97.65</td><td style="text-align: center;">2.35</td></tr> <tr><td>5</td><td>O/KEN/18/98 (K82/98)</td><td>KEN98-18</td><td style="text-align: center;">384</td><td style="text-align: center;">363</td><td style="text-align: center;">17</td><td style="text-align: center;">94.53</td><td style="text-align: center;">5.47</td></tr> <tr><td>6</td><td>O/KEN/5/2002</td><td>KEN02-05</td><td style="text-align: center;">639</td><td style="text-align: center;">596</td><td style="text-align: center;">0</td><td style="text-align: center;">93.27</td><td style="text-align: center;">6.73</td></tr> <tr><td>7</td><td>O/KEN/23/2004</td><td>KEN04-23</td><td style="text-align: center;">639</td><td style="text-align: center;">593</td><td style="text-align: center;">0</td><td style="text-align: center;">92.8</td><td style="text-align: center;">7.2</td></tr> <tr><td>8</td><td>O/ZAM/1/2000</td><td>ZAM00-01</td><td style="text-align: center;">639</td><td style="text-align: center;">591</td><td style="text-align: center;">0</td><td style="text-align: center;">92.49</td><td style="text-align: center;">7.51</td></tr> <tr><td>9</td><td>O/ZAM/2/2000</td><td>ZAM00-02</td><td style="text-align: center;">639</td><td style="text-align: center;">591</td><td style="text-align: center;">0</td><td style="text-align: center;">92.49</td><td style="text-align: center;">7.51</td></tr> <tr><td>10</td><td>O/KEN/29/2004</td><td>KEN04-29</td><td style="text-align: center;">639</td><td style="text-align: center;">590</td><td style="text-align: center;">0</td><td style="text-align: center;">92.33</td><td style="text-align: center;">7.67</td></tr> </tbody> </table>		Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference	1	O/KEN/6/2005	KEN05-06	639	633	0	99.06	0.94	2	O/KEN/30/2004	KEN04-30	639	632	0	98.9	1.1	3	O/KEN/4/2005	KEN05-04	639	630	0	98.59	1.41	4	O/KEN/7/2002	KEN02-07	639	624	0	97.65	2.35	5	O/KEN/18/98 (K82/98)	KEN98-18	384	363	17	94.53	5.47	6	O/KEN/5/2002	KEN02-05	639	596	0	93.27	6.73	7	O/KEN/23/2004	KEN04-23	639	593	0	92.8	7.2	8	O/ZAM/1/2000	ZAM00-01	639	591	0	92.49	7.51	9	O/ZAM/2/2000	ZAM00-02	639	591	0	92.49	7.51	10	O/KEN/29/2004	KEN04-29	639	590	0	92.33	7.67
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference																																																																																		
1	O/KEN/6/2005	KEN05-06	639	633	0	99.06	0.94																																																																																		
2	O/KEN/30/2004	KEN04-30	639	632	0	98.9	1.1																																																																																		
3	O/KEN/4/2005	KEN05-04	639	630	0	98.59	1.41																																																																																		
4	O/KEN/7/2002	KEN02-07	639	624	0	97.65	2.35																																																																																		
5	O/KEN/18/98 (K82/98)	KEN98-18	384	363	17	94.53	5.47																																																																																		
6	O/KEN/5/2002	KEN02-05	639	596	0	93.27	6.73																																																																																		
7	O/KEN/23/2004	KEN04-23	639	593	0	92.8	7.2																																																																																		
8	O/ZAM/1/2000	ZAM00-01	639	591	0	92.49	7.51																																																																																		
9	O/ZAM/2/2000	ZAM00-02	639	591	0	92.49	7.51																																																																																		
10	O/KEN/29/2004	KEN04-29	639	590	0	92.33	7.67																																																																																		
Relationships to Reference Virus Strains																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Pos.</th> <th style="text-align: left;">Virus name</th> <th style="text-align: left;">Filename</th> <th style="text-align: center;">No. nt compared</th> <th style="text-align: center;">No. nt matched</th> <th style="text-align: center;">No. of ambiguities</th> <th style="text-align: center;">% Identity</th> <th style="text-align: center;">% Difference</th> </tr> </thead> <tbody> <tr><td>1</td><td>O/TAW/2/99</td><td>TAW99-02</td><td style="text-align: center;">639</td><td style="text-align: center;">552</td><td style="text-align: center;">0</td><td style="text-align: center;">86.38</td><td style="text-align: center;">13.62</td></tr> <tr><td>2</td><td>O/IND/R2/75* [AF204276]</td><td>IND75--A</td><td style="text-align: center;">639</td><td style="text-align: center;">544</td><td style="text-align: center;">0</td><td style="text-align: center;">85.13</td><td style="text-align: center;">14.87</td></tr> <tr><td>3</td><td>O1/Manisa/TUR/69</td><td>TUR69--E</td><td style="text-align: center;">639</td><td style="text-align: center;">544</td><td style="text-align: center;">0</td><td style="text-align: center;">85.13</td><td style="text-align: center;">14.87</td></tr> <tr><td>4</td><td>O/IND/53/79 [AF292107]</td><td>IND79A53</td><td style="text-align: center;">639</td><td style="text-align: center;">542</td><td style="text-align: center;">0</td><td style="text-align: center;">84.82</td><td style="text-align: center;">15.18</td></tr> <tr><td>5</td><td>O/MOR/1/91</td><td>MOR91-01</td><td style="text-align: center;">639</td><td style="text-align: center;">541</td><td style="text-align: center;">0</td><td style="text-align: center;">84.66</td><td style="text-align: center;">15.34</td></tr> <tr><td>6</td><td>O/ISR/2/88</td><td>ISR88-02</td><td style="text-align: center;">639</td><td style="text-align: center;">539</td><td style="text-align: center;">0</td><td style="text-align: center;">84.35</td><td style="text-align: center;">15.65</td></tr> <tr><td>7</td><td>O/TAI/189/87* [TRRL]</td><td>TAI87-AC</td><td style="text-align: center;">639</td><td style="text-align: center;">520</td><td style="text-align: center;">0</td><td style="text-align: center;">81.38</td><td style="text-align: center;">18.62</td></tr> <tr><td>8</td><td>O/HKN/6/83</td><td>HKN83-06</td><td style="text-align: center;">637</td><td style="text-align: center;">512</td><td style="text-align: center;">2</td><td style="text-align: center;">80.38</td><td style="text-align: center;">19.62</td></tr> <tr><td>9</td><td>O1/BFS 1860/UK/67</td><td>UKG67--A</td><td style="text-align: center;">639</td><td style="text-align: center;">513</td><td style="text-align: center;">0</td><td style="text-align: center;">80.28</td><td style="text-align: center;">19.72</td></tr> <tr><td>10</td><td>O/PHI/5/95</td><td>PHI95-05</td><td style="text-align: center;">639</td><td style="text-align: center;">507</td><td style="text-align: center;">0</td><td style="text-align: center;">79.34</td><td style="text-align: center;">20.66</td></tr> </tbody> </table>		Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference	1	O/TAW/2/99	TAW99-02	639	552	0	86.38	13.62	2	O/IND/R2/75* [AF204276]	IND75--A	639	544	0	85.13	14.87	3	O1/Manisa/TUR/69	TUR69--E	639	544	0	85.13	14.87	4	O/IND/53/79 [AF292107]	IND79A53	639	542	0	84.82	15.18	5	O/MOR/1/91	MOR91-01	639	541	0	84.66	15.34	6	O/ISR/2/88	ISR88-02	639	539	0	84.35	15.65	7	O/TAI/189/87* [TRRL]	TAI87-AC	639	520	0	81.38	18.62	8	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62	9	O1/BFS 1860/UK/67	UKG67--A	639	513	0	80.28	19.72	10	O/PHI/5/95	PHI95-05	639	507	0	79.34	20.66
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference																																																																																		
1	O/TAW/2/99	TAW99-02	639	552	0	86.38	13.62																																																																																		
2	O/IND/R2/75* [AF204276]	IND75--A	639	544	0	85.13	14.87																																																																																		
3	O1/Manisa/TUR/69	TUR69--E	639	544	0	85.13	14.87																																																																																		
4	O/IND/53/79 [AF292107]	IND79A53	639	542	0	84.82	15.18																																																																																		
5	O/MOR/1/91	MOR91-01	639	541	0	84.66	15.34																																																																																		
6	O/ISR/2/88	ISR88-02	639	539	0	84.35	15.65																																																																																		
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	520	0	81.38	18.62																																																																																		
8	O/HKN/6/83	HKN83-06	637	512	2	80.38	19.62																																																																																		
9	O1/BFS 1860/UK/67	UKG67--A	639	513	0	80.28	19.72																																																																																		
10	O/PHI/5/95	PHI95-05	639	507	0	79.34	20.66																																																																																		
nt, nucleotides *, not a WRLFMD reference number																																																																																									

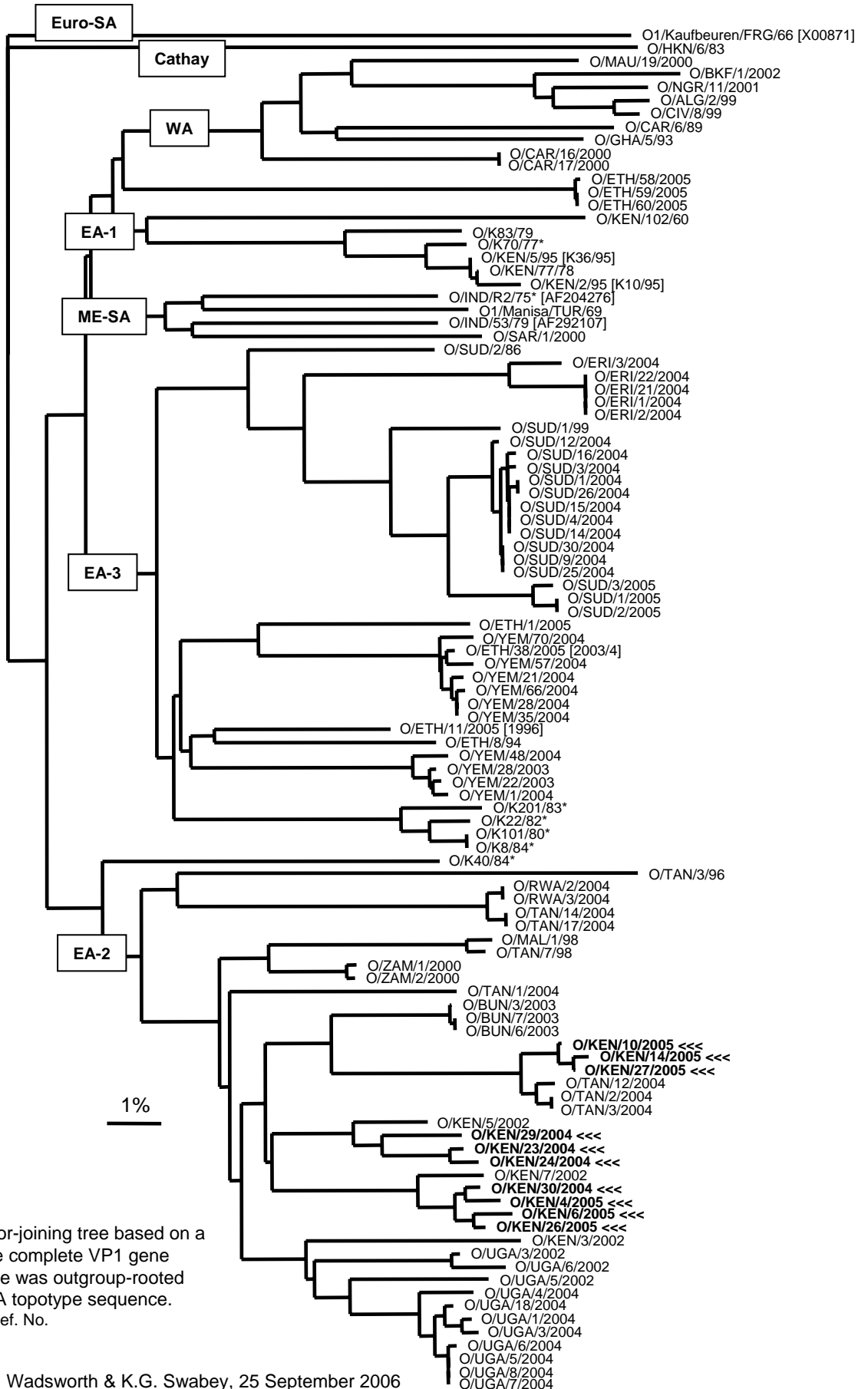
Molecular Epidemiology Report Form

IAH-P-EP-MEG-FOR-005-1

Page 1 of 1

Serotype: O WRL Ref No: KEN/27/2005 Sender Ref: K46/2005 Date collected: 15/07/2005 Date received by WRLFMD: 26/05/2006 Date received for sequencing: 07/06/2006 Species: Cattle Material used: BTy1 Region sequenced: VP1 RT-PCR primers: O-1C272F/EUR-2B52R; O-1C244F/EUR-2B52R No. of Nt determined: 639 No. of ambiguities: 0 Gene length: 639	Report date: 25/09/2006 Reported by: N.J. Knowles Checked by: D.P. King Topotype: EA-2 Genotype/strain: none designated Sequence filename: KEN05-27.SEQ Date sequence last updated: 28/06/2006 Total no. of comparisons: 1977 Min. no. of nt for comparison: 300 Total turn-around time: 122 days Sequencing time: 110 days																																																																																								
Comments:																																																																																									
Ten Most Closely Related Viruses																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Pos.</th> <th style="text-align: left;">Virus name</th> <th style="text-align: left;">Filename</th> <th style="text-align: center;">No. nt compared</th> <th style="text-align: center;">No. nt matched</th> <th style="text-align: center;">No. of ambiguities</th> <th style="text-align: center;">% Identity</th> <th style="text-align: center;">% Difference</th> </tr> </thead> <tbody> <tr><td>1</td><td>O/KEN/14/2005</td><td>KEN05-14</td><td style="text-align: center;">639</td><td style="text-align: center;">637</td><td style="text-align: center;">0</td><td style="text-align: center;">99.69</td><td style="text-align: center;">0.31</td></tr> <tr><td>2</td><td>O/KEN/10/2005</td><td>KEN05-10</td><td style="text-align: center;">639</td><td style="text-align: center;">637</td><td style="text-align: center;">0</td><td style="text-align: center;">99.69</td><td style="text-align: center;">0.31</td></tr> <tr><td>3</td><td>O/TAN/2/2004</td><td>TAN04-02</td><td style="text-align: center;">639</td><td style="text-align: center;">630</td><td style="text-align: center;">0</td><td style="text-align: center;">98.59</td><td style="text-align: center;">1.41</td></tr> <tr><td>4</td><td>O/TAN/3/2004</td><td>TAN04-03</td><td style="text-align: center;">639</td><td style="text-align: center;">630</td><td style="text-align: center;">0</td><td style="text-align: center;">98.59</td><td style="text-align: center;">1.41</td></tr> <tr><td>5</td><td>O/TAN/12/2004</td><td>TAN04-12</td><td style="text-align: center;">639</td><td style="text-align: center;">628</td><td style="text-align: center;">0</td><td style="text-align: center;">98.28</td><td style="text-align: center;">1.72</td></tr> <tr><td>6</td><td>O/BUN/7/2003</td><td>BUN03-07</td><td style="text-align: center;">639</td><td style="text-align: center;">596</td><td style="text-align: center;">0</td><td style="text-align: center;">93.27</td><td style="text-align: center;">6.73</td></tr> <tr><td>7</td><td>O/BUN/6/2003</td><td>BUN03A06</td><td style="text-align: center;">628</td><td style="text-align: center;">585</td><td style="text-align: center;">0</td><td style="text-align: center;">93.15</td><td style="text-align: center;">6.85</td></tr> <tr><td>8</td><td>O/BUN/3/2003</td><td>BUN03A03</td><td style="text-align: center;">634</td><td style="text-align: center;">590</td><td style="text-align: center;">4</td><td style="text-align: center;">93.06</td><td style="text-align: center;">6.94</td></tr> <tr><td>9</td><td>O/KEN/18/98 (K82/98)</td><td>KEN98-18</td><td style="text-align: center;">384</td><td style="text-align: center;">357</td><td style="text-align: center;">17</td><td style="text-align: center;">92.97</td><td style="text-align: center;">7.03</td></tr> <tr><td>10</td><td>O/BUN/3/2003</td><td>BUN03-03</td><td style="text-align: center;">500</td><td style="text-align: center;">463</td><td style="text-align: center;">10</td><td style="text-align: center;">92.6</td><td style="text-align: center;">7.4</td></tr> </tbody> </table>		Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference	1	O/KEN/14/2005	KEN05-14	639	637	0	99.69	0.31	2	O/KEN/10/2005	KEN05-10	639	637	0	99.69	0.31	3	O/TAN/2/2004	TAN04-02	639	630	0	98.59	1.41	4	O/TAN/3/2004	TAN04-03	639	630	0	98.59	1.41	5	O/TAN/12/2004	TAN04-12	639	628	0	98.28	1.72	6	O/BUN/7/2003	BUN03-07	639	596	0	93.27	6.73	7	O/BUN/6/2003	BUN03A06	628	585	0	93.15	6.85	8	O/BUN/3/2003	BUN03A03	634	590	4	93.06	6.94	9	O/KEN/18/98 (K82/98)	KEN98-18	384	357	17	92.97	7.03	10	O/BUN/3/2003	BUN03-03	500	463	10	92.6	7.4
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference																																																																																		
1	O/KEN/14/2005	KEN05-14	639	637	0	99.69	0.31																																																																																		
2	O/KEN/10/2005	KEN05-10	639	637	0	99.69	0.31																																																																																		
3	O/TAN/2/2004	TAN04-02	639	630	0	98.59	1.41																																																																																		
4	O/TAN/3/2004	TAN04-03	639	630	0	98.59	1.41																																																																																		
5	O/TAN/12/2004	TAN04-12	639	628	0	98.28	1.72																																																																																		
6	O/BUN/7/2003	BUN03-07	639	596	0	93.27	6.73																																																																																		
7	O/BUN/6/2003	BUN03A06	628	585	0	93.15	6.85																																																																																		
8	O/BUN/3/2003	BUN03A03	634	590	4	93.06	6.94																																																																																		
9	O/KEN/18/98 (K82/98)	KEN98-18	384	357	17	92.97	7.03																																																																																		
10	O/BUN/3/2003	BUN03-03	500	463	10	92.6	7.4																																																																																		
Relationships to Reference Virus Strains																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Pos.</th> <th style="text-align: left;">Virus name</th> <th style="text-align: left;">Filename</th> <th style="text-align: center;">No. nt compared</th> <th style="text-align: center;">No. nt matched</th> <th style="text-align: center;">No. of ambiguities</th> <th style="text-align: center;">% Identity</th> <th style="text-align: center;">% Difference</th> </tr> </thead> <tbody> <tr><td>1</td><td>O/MOR/1/91</td><td>MOR91-01</td><td style="text-align: center;">639</td><td style="text-align: center;">540</td><td style="text-align: center;">0</td><td style="text-align: center;">84.51</td><td style="text-align: center;">15.49</td></tr> <tr><td>2</td><td>O/ISR/2/88</td><td>ISR88-02</td><td style="text-align: center;">639</td><td style="text-align: center;">539</td><td style="text-align: center;">0</td><td style="text-align: center;">84.35</td><td style="text-align: center;">15.65</td></tr> <tr><td>3</td><td>O/IND/53/79 [AF292107]</td><td>IND79A53</td><td style="text-align: center;">639</td><td style="text-align: center;">537</td><td style="text-align: center;">0</td><td style="text-align: center;">84.04</td><td style="text-align: center;">15.96</td></tr> <tr><td>4</td><td>O/IND/R2/75* [AF204276]</td><td>IND75--A</td><td style="text-align: center;">639</td><td style="text-align: center;">537</td><td style="text-align: center;">0</td><td style="text-align: center;">84.04</td><td style="text-align: center;">15.96</td></tr> <tr><td>5</td><td>O/TAW/2/99</td><td>TAW99-02</td><td style="text-align: center;">639</td><td style="text-align: center;">535</td><td style="text-align: center;">0</td><td style="text-align: center;">83.72</td><td style="text-align: center;">16.28</td></tr> <tr><td>6</td><td>O1/Manisa/TUR/69</td><td>TUR69--E</td><td style="text-align: center;">639</td><td style="text-align: center;">526</td><td style="text-align: center;">0</td><td style="text-align: center;">82.32</td><td style="text-align: center;">17.68</td></tr> <tr><td>7</td><td>O/TAI/189/87* [TRRL]</td><td>TAI87-AC</td><td style="text-align: center;">639</td><td style="text-align: center;">515</td><td style="text-align: center;">0</td><td style="text-align: center;">80.59</td><td style="text-align: center;">19.41</td></tr> <tr><td>8</td><td>O1/BFS 1860/UK/67</td><td>UKG67--A</td><td style="text-align: center;">639</td><td style="text-align: center;">511</td><td style="text-align: center;">0</td><td style="text-align: center;">79.97</td><td style="text-align: center;">20.03</td></tr> <tr><td>9</td><td>O/PHI/5/95</td><td>PHI95-05</td><td style="text-align: center;">639</td><td style="text-align: center;">507</td><td style="text-align: center;">0</td><td style="text-align: center;">79.34</td><td style="text-align: center;">20.66</td></tr> <tr><td>10</td><td>O/HKN/6/83</td><td>HKN83-06</td><td style="text-align: center;">637</td><td style="text-align: center;">502</td><td style="text-align: center;">2</td><td style="text-align: center;">78.81</td><td style="text-align: center;">21.19</td></tr> </tbody> </table>		Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference	1	O/MOR/1/91	MOR91-01	639	540	0	84.51	15.49	2	O/ISR/2/88	ISR88-02	639	539	0	84.35	15.65	3	O/IND/53/79 [AF292107]	IND79A53	639	537	0	84.04	15.96	4	O/IND/R2/75* [AF204276]	IND75--A	639	537	0	84.04	15.96	5	O/TAW/2/99	TAW99-02	639	535	0	83.72	16.28	6	O1/Manisa/TUR/69	TUR69--E	639	526	0	82.32	17.68	7	O/TAI/189/87* [TRRL]	TAI87-AC	639	515	0	80.59	19.41	8	O1/BFS 1860/UK/67	UKG67--A	639	511	0	79.97	20.03	9	O/PHI/5/95	PHI95-05	639	507	0	79.34	20.66	10	O/HKN/6/83	HKN83-06	637	502	2	78.81	21.19
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference																																																																																		
1	O/MOR/1/91	MOR91-01	639	540	0	84.51	15.49																																																																																		
2	O/ISR/2/88	ISR88-02	639	539	0	84.35	15.65																																																																																		
3	O/IND/53/79 [AF292107]	IND79A53	639	537	0	84.04	15.96																																																																																		
4	O/IND/R2/75* [AF204276]	IND75--A	639	537	0	84.04	15.96																																																																																		
5	O/TAW/2/99	TAW99-02	639	535	0	83.72	16.28																																																																																		
6	O1/Manisa/TUR/69	TUR69--E	639	526	0	82.32	17.68																																																																																		
7	O/TAI/189/87* [TRRL]	TAI87-AC	639	515	0	80.59	19.41																																																																																		
8	O1/BFS 1860/UK/67	UKG67--A	639	511	0	79.97	20.03																																																																																		
9	O/PHI/5/95	PHI95-05	639	507	0	79.34	20.66																																																																																		
10	O/HKN/6/83	HKN83-06	637	502	2	78.81	21.19																																																																																		
nt, nucleotides *, not a WRLFMD reference number																																																																																									

Report on FMDV O from Kenya in 2004-2005



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (~639 nt). The tree was outgroup-rooted using the Euro-SA topotype sequence.
* Not a WRLFMD Ref. No.