

Serotype: O
WRL Ref No: SAU/3/2008
Sender Ref: 1
Date collected: 2008
Date received by WRLFMD: 25/03/2008
Date received for sequencing: 16/04/2008
Species: Cattle
Material used: BTy1
Region sequenced: VP1
RT-PCR primers: O-1C244F/EUR-2B52R;
O-1C272F/EUR-2B52R
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 19/05/2008
Topotype: ME-SA
Genotype/strain: PanAsia 2
Sequence filename: SAU08-03.SEQ
Date sequence last updated: 08/05/2008
Total no. of comparisons: 1729
Min. no. of nt for comparison: 300
Total turn-around time: 55 days
Sequencing time: 33 days

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/BAR/1/2008	BAR08-01	639	637	0	99.69	0.31
2	O/BAR/2/2008	BAR08-02	639	637	0	99.69	0.31
3	O/BAR/3/2008	BAR08-03	639	637	0	99.69	0.31
4	O/SAU/1/2008	SAU08-01	639	636	0	99.53	0.47
5	O/SAU/2/2008	SAU08-02	639	636	0	99.53	0.47
6	O/SAU/5/2008	SAU08-05	639	636	0	99.53	0.47
7	O/SAU/4/2008	SAU08-04	639	635	0	99.37	0.63
8	O/KUW/1/2008	KUW08-01	639	632	0	98.9	1.1
9	O/KUW/10/2008	KUW08-10	639	632	0	98.9	1.1
10	O/KUW/2/2008	KUW08-02	639	632	0	98.9	1.1

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (AJ294927)	TAW99-02	639	594	0	92.96	7.04
2	O/IND/53/79 [AF292107]	IND79A53	639	564	0	88.26	11.74
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	564	0	88.26	11.74
4	O/IND/R2/75* [AF204276]	IND75--A	639	558	0	87.32	12.68
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	547	0	85.6	14.4
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	547	0	85.6	14.4
7	O/MOR/1/91	MOR91-01	639	543	0	84.98	15.02
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	525	0	82.16	17.84
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	508	0	79.5	20.5

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 19/05/2008
WRL Ref No: SAU/4/2008	
Sender Ref: 2	
Date collected: 2008	Topotype: ME-SA
Date received by WRLFMD: 25/03/2008	Genotype/strain: PanAsia 2
Date received for sequencing: 16/04/2008	Sequence filename: SAU08-04.SEQ
Species: Cattle	Date sequence last updated: 13/05/2008
Material used: BTy1	Total no. of comparisons: 1729
Region sequenced: VP1	Min. no. of nt for comparison: 300
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Total turn-around time: 55 days
No. of Nt determined: 639	Sequencing time: 33 days
No. of ambiguities: 0	
Gene length: 639	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/SAU/1/2008	SAU08-01	639	636	0	99.53	0.47
2	O/SAU/2/2008	SAU08-02	639	636	0	99.53	0.47
3	O/SAU/5/2008	SAU08-05	639	636	0	99.53	0.47
4	O/BAR/1/2008	BAR08-01	639	635	0	99.37	0.63
5	O/BAR/2/2008	BAR08-02	639	635	0	99.37	0.63
6	O/BAR/3/2008	BAR08-03	639	635	0	99.37	0.63
7	O/SAU/3/2008	SAU08-03	639	635	0	99.37	0.63
8	O/KUW/1/2008	KUW08-01	639	632	0	98.9	1.1
9	O/KUW/10/2008	KUW08-10	639	632	0	98.9	1.1
10	O/KUW/2/2008	KUW08-02	639	632	0	98.9	1.1

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (AJ294927)	TAW99-02	639	594	0	92.96	7.04
2	O/IND/53/79 [AF292107]	IND79A53	639	562	0	87.95	12.05
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	562	0	87.95	12.05
4	O/IND/R2/75* [AF204276]	IND75--A	639	558	0	87.32	12.68
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	549	0	85.92	14.08
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	549	0	85.92	14.08
7	O/MOR/1/91	MOR91-01	639	545	0	85.29	14.71
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	521	0	81.53	18.47
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	515	2	80.85	19.15
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	510	0	79.81	20.19

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 19/05/2008
WRL Ref No: SAU/5/2008	
Sender Ref: 3	
Date collected: 2008	
Date received by WRLFMD: 25/03/2008	Topotype: ME-SA
Date received for sequencing: 16/04/2008	Genotype/strain: PanAsia 2
Species: Cattle	Sequence filename: SAU08-05.SEQ
Material used: BTy1	Date sequence last updated: 08/05/2008
Region sequenced: VP1	Total no. of comparisons: 1729
RT-PCR primers: O-1C244F/EUR-2B52R;	Min. no. of nt for comparison: 300
O-1C272F/EUR-2B52R	Total turn-around time: 55 days
No. of Nt determined: 639	Sequencing time: 33 days
No. of ambiguities: 0	
Gene length: 639	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/SAU/1/2008	SAU08-01	639	639	0	100	0
2	O/SAU/2/2008	SAU08-02	639	639	0	100	0
3	O/BAR/1/2008	BAR08-01	639	636	0	99.53	0.47
4	O/BAR/2/2008	BAR08-02	639	636	0	99.53	0.47
5	O/BAR/3/2008	BAR08-03	639	636	0	99.53	0.47
6	O/SAU/3/2008	SAU08-03	639	636	0	99.53	0.47
7	O/SAU/4/2008	SAU08-04	639	636	0	99.53	0.47
8	O/KUW/1/2008	KUW08-01	639	633	0	99.06	0.94
9	O/KUW/10/2008	KUW08-10	639	633	0	99.06	0.94
10	O/KUW/2/2008	KUW08-02	639	633	0	99.06	0.94

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (AJ294927)	TAW99-02	639	595	0	93.11	6.89
2	O/IND/53/79 [AF292107]	IND79A53	639	563	0	88.11	11.89
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	563	0	88.11	11.89
4	O/IND/R2/75* [AF204276]	IND75--A	639	559	0	87.48	12.52
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	550	0	86.07	13.93
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	548	0	85.76	14.24
7	O/MOR/1/91	MOR91-01	639	544	0	85.13	14.87
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	522	0	81.69	18.31
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	514	2	80.69	19.31
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	507	0	79.34	20.66

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 19/05/2008
WRL Ref No: SAU/6/2008	
Sender Ref: 4	
Date collected: 2008	
Date received by WRLFMD: 25/03/2008	Topotype: ME-SA
Date received for sequencing: 16/04/2008	Genotype/strain: PanAsia 2
Species: Cattle	Sequence filename: SAU08-06.SEQ
Material used: BTy1	Date sequence last updated: 13/05/2008
Region sequenced: VP1	Total no. of comparisons: 1729
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 55 days
No. of ambiguities: 0	Sequencing time: 33 days
Gene length: 639	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/IRN/27/2007	IRN07-27	639	638	0	99.84	0.16
2	O/KUW/1/2008	KUW08-01	639	637	0	99.69	0.31
3	O/KUW/10/2008	KUW08-10	639	637	0	99.69	0.31
4	O/KUW/2/2008	KUW08-02	639	637	0	99.69	0.31
5	O/KUW/6/2008	KUW08-06	639	637	0	99.69	0.31
6	O/KUW/7/2008	KUW08-07	639	637	0	99.69	0.31
7	O/KUW/8/2008	KUW08-08	639	637	0	99.69	0.31
8	O/KUW/3/2008	KUW08-03	639	636	0	99.53	0.47
9	O/KUW/4/2008	KUW08-04	639	636	0	99.53	0.47
10	O/KUW/5/2008	KUW08-05	639	636	0	99.53	0.47

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (AJ294927)	TAW99-02	639	599	0	93.74	6.26
2	O/IND/53/79 [AF292107]	IND79A53	639	567	0	88.73	11.27
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	567	0	88.73	11.27
4	O/IND/R2/75* [AF204276]	IND75--A	639	563	0	88.11	11.89
5	O/ISR/2/88 (DQ164899)	ISR88-02	639	552	0	86.38	13.62
6	O/TAI/189/87* [TRRL]	TAI87-AC	639	552	0	86.38	13.62
7	O/MOR/1/91	MOR91-01	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	525	0	82.16	17.84
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	517	2	81.16	18.84
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	513	0	80.28	19.72

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O	Report date: 19/05/2008
WRL Ref No: SAU/7/2008	
Sender Ref: 5	
Date collected: 2008	
Date received by WRLFMD: 25/03/2008	Topotype: ME-SA
Date received for sequencing: 16/04/2008	Genotype/strain: PanAsia 2
Species: Cattle	Sequence filename: SAU08-07.SEQ
Material used: BTy1	Date sequence last updated: 06/05/2008
Region sequenced: VP1	Total no. of comparisons: 1729
RT-PCR primers: O-1C244F/EUR-2B52R; O-1C272F/EUR-2B52R	Min. no. of nt for comparison: 300
No. of Nt determined: 639	Total turn-around time: 55 days
No. of ambiguities: 0	Sequencing time: 33 days
Gene length: 639	

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/KUW/3/2008	KUW08-03	639	637	0	99.69	0.31
2	O/KUW/4/2008	KUW08-04	639	637	0	99.69	0.31
3	O/KUW/5/2008	KUW08-05	639	637	0	99.69	0.31
4	O/SAU/6/2008	SAU08-06	639	636	0	99.53	0.47
5	O/IRN/27/2007	IRN07-27	639	635	0	99.37	0.63
6	O/KUW/1/2008	KUW08-01	639	634	0	99.22	0.78
7	O/KUW/10/2008	KUW08-10	639	634	0	99.22	0.78
8	O/KUW/2/2008	KUW08-02	639	634	0	99.22	0.78
9	O/KUW/6/2008	KUW08-06	639	634	0	99.22	0.78
10	O/KUW/7/2008	KUW08-07	639	634	0	99.22	0.78

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/TAW/2/99 (AJ294927)	TAW99-02	639	596	0	93.27	6.73
2	O/IND/53/79 [AF292107]	IND79A53	639	566	0	88.58	11.42
3	O1/Manisa/TUR/69 (AJ251477)	TUR69--E	639	566	0	88.58	11.42
4	O/IND/R2/75* [AF204276]	IND75--A	639	562	0	87.95	12.05
5	O/TAI/189/87* [TRRL]	TAI87-AC	639	553	0	86.54	13.46
6	O/ISR/2/88 (DQ164899)	ISR88-02	639	551	0	86.23	13.77
7	O/MOR/1/91	MOR91-01	639	548	0	85.76	14.24
8	O/PHI/5/95 (DQ164946)	PHI95-05	639	524	0	82	18
9	O/HKN/6/83 (AJ294919)	HKN83-06	637	516	2	81	19
10	O1/BFS 1860/UK/67 (J02185)	UKG67--A	639	512	0	80.13	19.87

nt, nucleotides
*, not a WRLFMD reference number

Report on FMD type O viruses from Saudi Arabia in 2008

Software: MEGA 4.0

No. of Taxa : 166

Data File : n:\evd\meg\db\fmdiv\o\SAU2008b.meg

Data Title : Saudi Arabia 2008

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 : 639

No Of Bootstrap Reps = 1000

Only bootstrap values of 70% and less are shown

* , not a WRLFMD Ref. No.

N.J. Knowles, J. Wadsworth & K. Ebert, 12 June 2008

