

Serotype: O
WRL Ref No: HKN/3/2004
Date collected: 28/01/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-03.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/11/2004	HKN04-11	639	638	0	99.84	0.16
2	O/HKN/12/2004	HKN04-12	639	637	0	99.69	0.31
3	O/HKN/6/2004	HKN04-06	639	637	0	99.69	0.31
4	O/HKN/8/2004	HKN04-08	639	637	0	99.69	0.31
5	O/HKN/9/2004	HKN04-09	639	636	0	99.53	0.47
6	O/HKN/7/2004	HKN04-07	639	634	0	99.22	0.78
7	O/HKN/4/2004	HKN04-04	639	632	0	98.9	1.1
8	O/HKN/10/2004	HKN04-10	639	630	0	98.59	1.41
9	O/HKN/3/2003	HKN03-03	638	627	1	98.28	1.72
10	O/HKN/2/2003	HKN03-02	637	626	2	98.27	1.73

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	592	0	92.64	7.36
2	O/HKN/6/83	HKN83-06	637	554	2	86.97	13.03
3	O/MOR/1/91	MOR91-01	207	169	3	81.64	18.36
4	O/IND/53/79	IND79A53	639	521	0	81.53	18.47
5	O/ISR/2/88	ISR88-02	639	518	0	81.06	18.94
6	O/TAW/2/99	TAW99-02	639	514	0	80.44	19.56
7	O1/Manisa/TUR/69	TUR69--E	639	513	0	80.28	19.72
8	O/TAI/189/87*	TAI87-AC	639	509	0	79.66	20.34
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	497	0	77.78	22.22

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/4/2004
Date collected: 11/02/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004

Topotype: Cathay

Genotype/strain: none

Sequence filename: HKN04-04.SEQ

Date sequence last updated: 27/09/2004

Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/6/2004	HKN04-06	639	632	0	98.9	1.1
2	O/HKN/3/2004	HKN04-03	639	632	0	98.9	1.1
3	O/HKN/11/2004	HKN04-11	639	631	0	98.75	1.25
4	O/HKN/7/2004	HKN04-07	639	631	0	98.75	1.25
5	O/HKN/8/2004	HKN04-08	639	630	0	98.59	1.41
6	O/HKN/12/2004	HKN04-12	639	630	0	98.59	1.41
7	O/HKN/9/2004	HKN04-09	639	629	0	98.44	1.56
8	O/HKN/10/2004	HKN04-10	639	627	0	98.12	1.88
9	O/HKN/3/2003	HKN03-03	638	624	1	97.81	2.19
10	O/HKN/2/2003	HKN03-02	637	623	2	97.8	2.2

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	587	0	91.86	8.14
2	O/HKN/6/83	HKN83-06	637	547	2	85.87	14.13
3	O/MOR/1/91	MOR91-01	207	169	3	81.64	18.36
4	O/IND/53/79	IND79A53	639	520	0	81.38	18.62
5	O/ISR/2/88	ISR88-02	639	517	0	80.91	19.09
6	O/TAW/2/99	TAW99-02	639	513	0	80.28	19.72
7	O1/Manisa/TUR/69	TUR69--E	639	510	0	79.81	20.19
8	O/TAI/189/87*	TAI87-AC	639	510	0	79.81	20.19
9	O/IND/R2/75*	IND75--A	639	502	0	78.56	21.44
10	O1/BFS 1860/UK/67	UKG67--A	639	494	0	77.31	22.69

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/6/2004
Date collected: 02/03/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-06.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/3/2004	HKN04-03	639	637	0	99.69	0.31
2	O/HKN/11/2004	HKN04-11	639	636	0	99.53	0.47
3	O/HKN/8/2004	HKN04-08	639	635	0	99.37	0.63
4	O/HKN/12/2004	HKN04-12	639	635	0	99.37	0.63
5	O/HKN/9/2004	HKN04-09	639	634	0	99.22	0.78
6	O/HKN/7/2004	HKN04-07	639	632	0	98.9	1.1
7	O/HKN/4/2004	HKN04-04	639	632	0	98.9	1.1
8	O/HKN/10/2004	HKN04-10	639	628	0	98.28	1.72
9	O/HKN/3/2003	HKN03-03	638	625	1	97.96	2.04
10	O/HKN/2/2003	HKN03-02	637	624	2	97.96	2.04

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	590	0	92.33	7.67
2	O/HKN/6/83	HKN83-06	637	552	2	86.66	13.34
3	O/MOR/1/91	MOR91-01	207	170	3	82.13	17.87
4	O/IND/53/79	IND79A53	639	522	0	81.69	18.31
5	O/ISR/2/88	ISR88-02	639	520	0	81.38	18.62
6	O/TAW/2/99	TAW99-02	639	514	0	80.44	19.56
7	O1/Manisa/TUR/69	TUR69--E	639	511	0	79.97	20.03
8	O/TAI/189/87*	TAI87-AC	639	509	0	79.66	20.34
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	499	0	78.09	21.91

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/7/2004
Date collected: 18/03/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-07.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/3/2004	HKN04-03	639	634	0	99.22	0.78
2	O/HKN/12/2004	HKN04-12	639	634	0	99.22	0.78
3	O/HKN/11/2004	HKN04-11	639	633	0	99.06	0.94
4	O/HKN/9/2004	HKN04-09	639	633	0	99.06	0.94
5	O/HKN/10/2004	HKN04-10	639	633	0	99.06	0.94
6	O/HKN/8/2004	HKN04-08	639	632	0	98.9	1.1
7	O/HKN/6/2004	HKN04-06	639	632	0	98.9	1.1
8	O/HKN/4/2004	HKN04-04	639	631	0	98.75	1.25
9	O/HKN/3/2003	HKN03-03	638	626	1	98.12	1.88
10	O/HKN/2/2003	HKN03-02	637	625	2	98.12	1.88

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	593	0	92.8	7.2
2	O/HKN/6/83	HKN83-06	637	553	2	86.81	13.19
3	O/IND/53/79	IND79A53	639	521	0	81.53	18.47
4	O/MOR/1/91	MOR91-01	207	168	3	81.16	18.84
5	O/ISR/2/88	ISR88-02	639	518	0	81.06	18.94
6	O/TAW/2/99	TAW99-02	639	514	0	80.44	19.56
7	O1/Manisa/TUR/69	TUR69--E	639	513	0	80.28	19.72
8	O/TAI/189/87*	TAI87-AC	639	509	0	79.66	20.34
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	496	0	77.62	22.38

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/8/2004
Date collected: 11/08/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-08.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/11/2004	HKN04-11	639	638	0	99.84	0.16
2	O/HKN/3/2004	HKN04-03	639	637	0	99.69	0.31
3	O/HKN/12/2004	HKN04-12	639	635	0	99.37	0.63
4	O/HKN/6/2004	HKN04-06	639	635	0	99.37	0.63
5	O/HKN/9/2004	HKN04-09	639	634	0	99.22	0.78
6	O/HKN/7/2004	HKN04-07	639	632	0	98.9	1.1
7	O/HKN/4/2004	HKN04-04	639	630	0	98.59	1.41
8	O/HKN/10/2004	HKN04-10	639	628	0	98.28	1.72
9	O/HKN/3/2003	HKN03-03	638	625	1	97.96	2.04
10	O/HKN/2/2003	HKN03-02	637	624	2	97.96	2.04

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	590	0	92.33	7.67
2	O/HKN/6/83	HKN83-06	637	554	2	86.97	13.03
3	O/MOR/1/91	MOR91-01	207	169	3	81.64	18.36
4	O/IND/53/79	IND79A53	639	520	0	81.38	18.62
5	O/ISR/2/88	ISR88-02	639	516	0	80.75	19.25
6	O1/Manisa/TUR/69	TUR69--E	639	514	0	80.44	19.56
7	O/TAW/2/99	TAW99-02	639	513	0	80.28	19.72
8	O/TAI/189/87*	TAI87-AC	639	508	0	79.5	20.5
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	499	0	78.09	21.91

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/9/2004
Date collected: 11/08/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-09.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/12/2004	HKN04-12	639	638	0	99.84	0.16
2	O/HKN/3/2004	HKN04-03	639	636	0	99.53	0.47
3	O/HKN/11/2004	HKN04-11	639	635	0	99.37	0.63
4	O/HKN/6/2004	HKN04-06	639	634	0	99.22	0.78
5	O/HKN/8/2004	HKN04-08	639	634	0	99.22	0.78
6	O/HKN/7/2004	HKN04-07	639	633	0	99.06	0.94
7	O/HKN/4/2004	HKN04-04	639	629	0	98.44	1.56
8	O/HKN/10/2004	HKN04-10	639	629	0	98.44	1.56
9	O/HKN/3/2003	HKN03-03	638	624	1	97.81	2.19
10	O/HKN/2/2003	HKN03-02	637	623	2	97.8	2.2

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	591	0	92.49	7.51
2	O/HKN/6/83	HKN83-06	637	554	2	86.97	13.03
3	O/IND/53/79	IND79A53	639	522	0	81.69	18.31
4	O/MOR/1/91	MOR91-01	207	168	3	81.16	18.84
5	O/ISR/2/88	ISR88-02	639	517	0	80.91	19.09
6	O/TAW/2/99	TAW99-02	639	515	0	80.59	19.41
7	O1/Manisa/TUR/69	TUR69--E	639	514	0	80.44	19.56
8	O/TAI/189/87*	TAI87-AC	639	510	0	79.81	20.19
9	O/IND/R2/75*	IND75--A	639	504	0	78.87	21.13
10	O1/BFS 1860/UK/67	UKG67--A	639	498	0	77.93	22.07

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/10/2004
Date collected: 11/08/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-10.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/7/2004	HKN04-07	639	633	0	99.06	0.94
2	O/HKN/12/2004	HKN04-12	639	630	0	98.59	1.41
3	O/HKN/3/2004	HKN04-03	639	630	0	98.59	1.41
4	O/HKN/9/2004	HKN04-09	639	629	0	98.44	1.56
5	O/HKN/11/2004	HKN04-11	639	629	0	98.44	1.56
6	O/HKN/6/2004	HKN04-06	639	628	0	98.28	1.72
7	O/HKN/8/2004	HKN04-08	639	628	0	98.28	1.72
8	O/HKN/4/2004	HKN04-04	639	627	0	98.12	1.88
9	O/HKN/3/2003	HKN03-03	638	622	1	97.49	2.51
10	O/HKN/2/2003	HKN03-02	637	621	2	97.49	2.51

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	591	0	92.49	7.51
2	O/HKN/6/83	HKN83-06	637	549	2	86.19	13.81
3	O/IND/53/79	IND79A53	639	522	0	81.69	18.31
4	O/MOR/1/91	MOR91-01	207	169	3	81.64	18.36
5	O/ISR/2/88	ISR88-02	639	519	0	81.22	18.78
6	O/TAW/2/99	TAW99-02	639	516	0	80.75	19.25
7	O1/Manisa/TUR/69	TUR69--E	639	515	0	80.59	19.41
8	O/TAI/189/87*	TAI87-AC	639	509	0	79.66	20.34
9	O/IND/R2/75*	IND75--A	639	505	0	79.03	20.97
10	O1/BFS 1860/UK/67	UKG67--A	639	493	0	77.15	22.85

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/11/2004
Date collected: 11/08/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004

Topotype: Cathay

Genotype/strain: none

Sequence filename: HKN04-11.SEQ

Date sequence last updated: 27/09/2004

Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/8/2004	HKN04-08	639	638	0	99.84	0.16
2	O/HKN/3/2004	HKN04-03	639	638	0	99.84	0.16
3	O/HKN/12/2004	HKN04-12	639	636	0	99.53	0.47
4	O/HKN/6/2004	HKN04-06	639	636	0	99.53	0.47
5	O/HKN/9/2004	HKN04-09	639	635	0	99.37	0.63
6	O/HKN/7/2004	HKN04-07	639	633	0	99.06	0.94
7	O/HKN/4/2004	HKN04-04	639	631	0	98.75	1.25
8	O/HKN/10/2004	HKN04-10	639	629	0	98.44	1.56
9	O/HKN/3/2003	HKN03-03	638	626	1	98.12	1.88
10	O/HKN/2/2003	HKN03-02	637	625	2	98.12	1.88

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	591	0	92.49	7.51
2	O/HKN/6/83	HKN83-06	637	555	2	87.13	12.87
3	O/MOR/1/91	MOR91-01	207	169	3	81.64	18.36
4	O/IND/53/79	IND79A53	639	520	0	81.38	18.62
5	O/ISR/2/88	ISR88-02	639	517	0	80.91	19.09
6	O1/Manisa/TUR/69	TUR69--E	639	514	0	80.44	19.56
7	O/TAW/2/99	TAW99-02	639	513	0	80.28	19.72
8	O/TAI/189/87*	TAI87-AC	639	508	0	79.5	20.5
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	498	0	77.93	22.07

nt, nucleotides

*, not a WRLFMD reference number

Serotype: O
WRL Ref No: HKN/12/2004
Date collected: 11/08/2004
Date received: 07/09/2004
Species: Porcine
Material used: RS1
Region sequenced: VP1
RT-PCR primers: O-1C272F/NK61
No. of Nt determined: 639
No. of ambiguities: 0
Gene length: 639

Report date: 28/09/2004
Topotype: Cathay
Genotype/strain: none
Sequence filename: HKN04-12.SEQ
Date sequence last updated: 27/09/2004
Total no. of comparisons: 1454

Comments:

Ten Most Closely Related Viruses

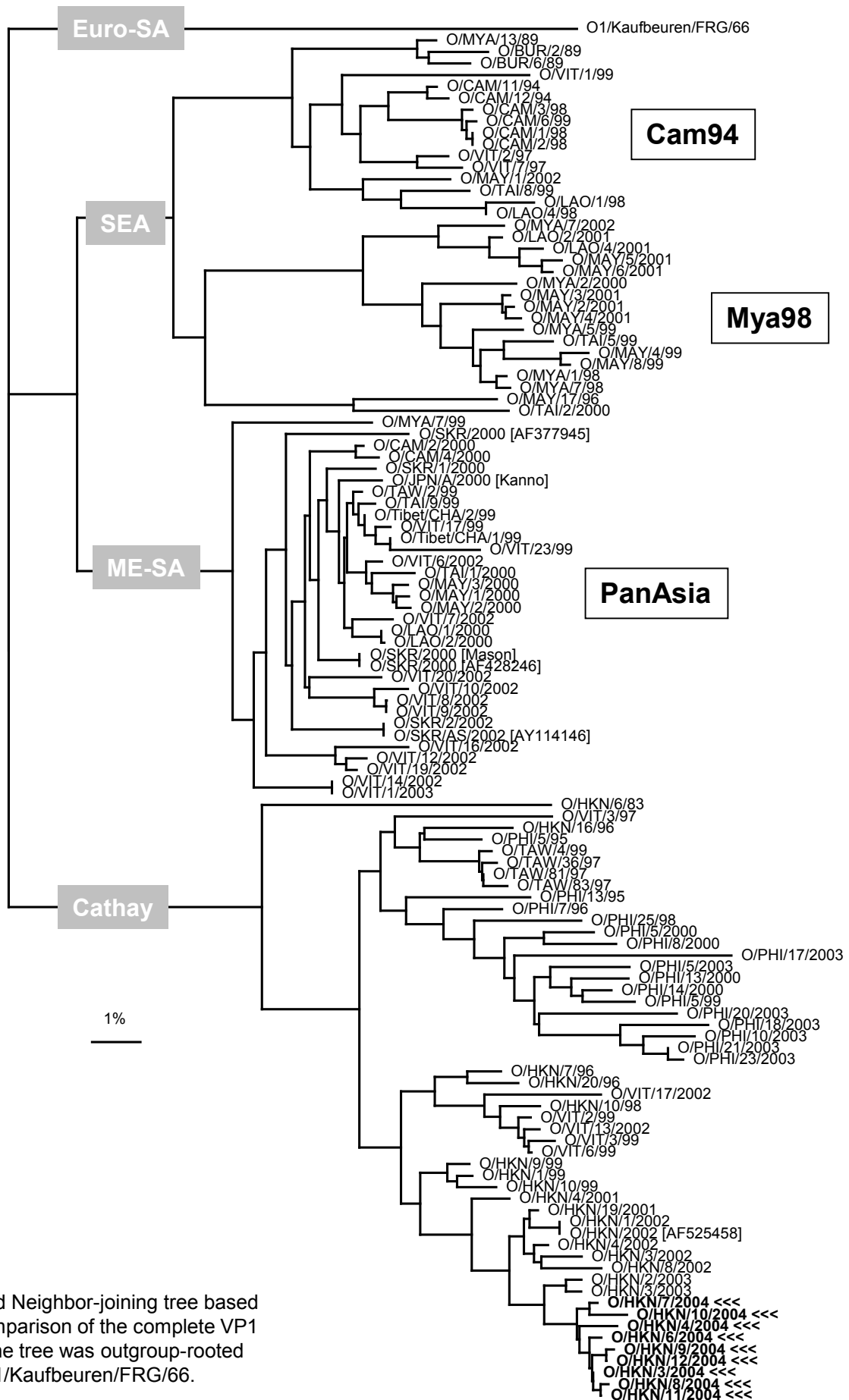
Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/HKN/9/2004	HKN04-09	639	638	0	99.84	0.16
2	O/HKN/3/2004	HKN04-03	639	637	0	99.69	0.31
3	O/HKN/11/2004	HKN04-11	639	636	0	99.53	0.47
4	O/HKN/6/2004	HKN04-06	639	635	0	99.37	0.63
5	O/HKN/8/2004	HKN04-08	639	635	0	99.37	0.63
6	O/HKN/7/2004	HKN04-07	639	634	0	99.22	0.78
7	O/HKN/4/2004	HKN04-04	639	630	0	98.59	1.41
8	O/HKN/10/2004	HKN04-10	639	630	0	98.59	1.41
9	O/HKN/3/2003	HKN03-03	638	625	1	97.96	2.04
10	O/HKN/2/2003	HKN03-02	637	624	2	97.96	2.04

Relationships to Reference Virus Strains

Pos.	Virus name	Filename	No. nt compared	No. nt matched	No. of ambiguities	% Identity	% Difference
1	O/PHI/5/95	PHI95-05	639	592	0	92.64	7.36
2	O/HKN/6/83	HKN83-06	637	554	2	86.97	13.03
3	O/IND/53/79	IND79A53	639	521	0	81.53	18.47
4	O/MOR/1/91	MOR91-01	207	168	3	81.16	18.84
5	O/ISR/2/88	ISR88-02	639	516	0	80.75	19.25
6	O/TAW/2/99	TAW99-02	639	514	0	80.44	19.56
7	O1/Manisa/TUR/69	TUR69--E	639	513	0	80.28	19.72
8	O/TAI/189/87*	TAI87-AC	639	509	0	79.66	20.34
9	O/IND/R2/75*	IND75--A	639	503	0	78.72	21.28
10	O1/BFS 1860/UK/67	UKG67--A	639	497	0	77.78	22.22

nt, nucleotides

*, not a WRLFMD reference number



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/Kaufbeuren/FRG/66.