

Appendix 1. Designation and origin of food-and-mouth disease type O viruses studied

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/AFG/16/2003	Tashqurghan, Balkh, Afghanistan	Apr 10, 2003	Bovine	DQ165035
ME-SA	PanAsia	O/AFG/50/2003	Center, Takhar, Afghanistan	Apr 14, 2003	Bovine	DQ165036
ME-SA	Ind2001	O/BAR/2/97	Bahrain	1997	Not known	AJ318824†
ME-SA	PanAsia	O/BAR/8/98	Bahrain	1998	Bovine	AJ318825†
ME-SA	PanAsia	O/BAR/6/99	Bahrain	1999	Bovine	DQ164862†
ME-SA	Ind2001	O/BAR/1/2001	Bahrain	May 2001	Bovine	DQ164863†
ME-SA	PanAsia	O/BHU/1/98	Serbithang, Bhutan	Feb 8, 1998	Porcine	AJ318826†
ME-SA	PanAsia	O/BHU/2/2002	Bhutan	2002	Not known	DQ165037
ME-SA	Ind2001	O/BHU/7/2002	Bhutan	2002	Not known	DQ164864†
ME-SA	PanAsia	O/BHU/38/2002	Bumthang, Bhutan	Jul 29, 2002	Bovine	DQ165038
ME-SA	PanAsia	O/BHU/15/2003	Eastern Region, Bhutan	Aug 6, 2003	Bovine	DQ164865†
ME-SA	PanAsia	O/BHU/22/2003	Eastern Region, Bhutan	Aug 16, 2003	Bovine	DQ165039
ME-SA	PanAsia	O/BHU/24/2003	Southern Region, Bhutan	Aug 16, 2003	Bovine	DQ165040
ME-SA	PanAsia	O/BHU/25/2003	Southern Region, Bhutan	Aug 16, 2003	Bovine	DQ164866†
ME-SA	PanAsia	O/BHU/41/2003	West Central Region, Bhutan	Oct 20, 2003	Bovine	DQ165041
ME-SA	PanAsia	O/BHU/47/2003	Southern Region, Bhutan	Dec 10, 2003	Bovine	DQ165042
ME-SA	PanAsia	O/BHU/49/2003	Western Region, Bhutan	Dec 31, 2003	Bovine	DQ164867†
ME-SA	PanAsia	O/BHU/26/2004	Western Region, Bhutan	Mar 2004	Bovine	DQ165043
ME-SA	PanAsia	O/BHU/27/2004	Western Region, Bhutan	Mar 2004	Bovine	DQ164868†
ME-SA	PanAsia	O/BHU/28/2004	Western Region, Bhutan	Mar 2004	Bovine	DQ165044
ME-SA	PanAsia	O/BHU/30/2004	Bhutan	Feb 16, 2004	Bovine	DQ165045
ME-SA	PanAsia	O/BHU/31/2004	Bhutan	Feb 16, 2004	Bovine	DQ164869†
ME-SA	PanAsia	O/BHU/33/2004	Bhutan	Feb 27, 2004	Bovine	DQ165046
ME-SA	PanAsia	O/BHU/39/2004	Bhutan	Apr 7, 2004	Bovine	DQ164870†
ME-SA	PanAsia	O/BHU/40/2004	Bhutan	Apr 7, 2004	Bovine	DQ165047
SEA	-	O/CAM/3/98	Kg. Speu, Cambodia	May 1, 1998	Bovine	AJ294910
ME-SA	PanAsia	O/CAM/2/2000	Angkor Chum, Siem Reap, Cambodia	Jan 27, 2000	Bovine	AJ318828†

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/CAM/4/2000	Angkor Chum, Siem Reap, Cambodia	Jan 29, 2000	Bovine	AJ318829†
ME-SA	PanAsia	O/Tibet/CHA/99	Tibet, P.R. China	1999	Bovine	AJ539138
WA	-	O/CIV/8/99	Côte d'Ivoire	1999	Bovine	AJ303485
ME-SA	-	O1/Sharquia/EGY/72	Sharquia Governate, Egypt	1972	Bovine	DQ164871†
Euro-SA	-	O1/Kaufbeuren/FRG/66	Kaufbeuren, Germany	1966	Bovine	X00871
ME-SA	PanAsia	O/FRA/1/2001	Mayenne, Pays de la Loire, France	Mar 2001	Not known	DQ164872†
ME-SA	PanAsia	O/FRA/1/2001	Mayenne, Pays de la Loire, France	Mar 2001	Not known	AJ633821
WA	-	O/GHA/5/93	Kintampo, Ghana	Jan 6, 1993	Bovine	AJ303488
WA	-	O/GNA/4/99	Kawkan/Madina, Guinea	May 8, 1999	Bovine	DQ165071
ME-SA	Branch A	O/GRE/23/94	Xanthi, Greece	Aug 4, 1994	Bovine	DQ164873†
ME-SA	Iran2001	O/GRE/18/96	Issakion, Didymotiho, Evros, Greece	Jul 31, 1996	ovine	DQ164874†
Cathay	-	O/HKN/21/70	Hang Tau, Sheung Shiu, N. T., Kowloon, Hong Kong	Mar 13, 1970	Porcine	AJ294911
Cathay	-	O/HKN/6/83	Pokfulam, Hong Kong Island	Dec 18, 1982	Bovine	AJ294919
Cathay	-	O/HKN/12/91	Sek Kwu Chau, N.T., Kowloon, Hong Kong	Nov 26, 1991	Porcine	AJ294921
Cathay	-	O/HKN/16/96	Takwuling, N.T., Kowloon, Hong Kong	Mar 29, 1996	Porcine	AJ294923
Cathay	-	O/HKN/20/96	Hong Kong	Apr 17, 1996	Bovine	AJ294924
Cathay	-	O/HKN/1/99	Mong Tseng Tsuen, Yuen Long, Hong Kong	Jan 5, 1998	Porcine	AJ294925
Cathay	-	O/HKN/4/2001	Hong Kong	2001	Not known	DQ164875†
Cathay	-	O/HKN/19/2001	Sheun Shui, NT, Hong Kong	Sep 28, 2001	Porcine	DQ164876†
Cathay	-	O/HKN/1/2002	Yuen Long, New Territories, Hong Kong	Jan 22, 2002	Porcine	DQ164877†
Cathay	-	O/HKN/3/2002	Yuen Long, New Territories, Hong Kong	Jan 31, 2002	Porcine	DQ164878†
Cathay	-	O/HKN/2/2003	Hong Kong	2003	Porcine	DQ164879†
Cathay	-	O/HKN/3/2003	Hong Kong	2003	Porcine	DQ164880†
Cathay	-	O/HKN/3/2004	Hong Kong	Jan 28, 2004	Porcine	DQ164881†
Cathay	-	O/HKN/4/2004	Hong Kong	Feb 11, 2004	Porcine	DQ164882†
Cathay	-	O/HKN/6/2004	Hong Kong	Mar 2, 2004	Porcine	DQ164883†
Cathay	-	O/HKN/7/2004	Hong Kong	Mar 18, 2004	Porcine	DQ164884†
Cathay	-	O/HKN/8/2004	Hong Kong	Aug 11, 2004	Porcine	DQ164885†

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Cathay	-	O/HKN/9/2004	Hong Kong	Aug 11, 2004	Porcine	DQ164886†
Cathay	-	O/HKN/10/2004	Hong Kong	Aug 11, 2004	Porcine	DQ164887†
Cathay	-	O/HKN/11/2004	Hong Kong	Aug 11, 2004	Porcine	DQ164888†
Cathay	-	O/HKN/12/2004	Hong Kong	Aug 11, 2004	Porcine	DQ164889†
ME-SA	-	O5/IND/1/62	Thakurdwara, Moradabad, Uttar Pradesh, India	1962	Not known	DQ164890†
ME-SA	Branch B	O5/IND/62	Thakurdwara, Moradabad, Uttar Pradesh, India	1962	Not known	AY593828
ME-SA	Branch B	O5/IND/1/62	Thakurdwara, Moradabad, Uttar Pradesh, India	1962	Not known	Ref. 16
ME-SA	Branch B	O/IND/R2/75*	Tamilnadu, India	1975	Bovine	AF204276
ME-SA	Branch A	O/IND/53/79	Tamilnadu, India	1979	Bovine	AF292107
ME-SA	Branch A	O/IND/136/87*	Guwahati, Assam, India	1987	Bovine	Ref. 16
ME-SA	Branch A	O/IND/4/88*	Bareilly, Uttar Pradesh, India	1988	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/231/88*	Kheda, Gujarat, India	1982	Bovine	Ref. 16
ME-SA	Branch A	O/IND/8/89*	Bangalore, Karnataka, India	1989	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/6/90*	Jalandhar, Punjab, India	1990	Bovine	Ref. 16
ME-SA	Branch B	O/IND/79/90*	Jind, Haryana, India	1988	Bovine	Ref. 16
ME-SA	Branch A	O/IND/100/90*	Jalandhar, Punjab, India	1989	Porcine	Ref. 16
ME-SA	PanAsia	O/IND/232/90*	Cuttack, Orissa, India	1990	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/234/90*	Cuttack, Orissa, India	1990	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/235/90*	Cuttack, Orissa, India	1990	Bovine	Ref. 16
ME-SA	Branch A	O/IND/7/94*	Bangalore, Karnataka, India	1993	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/27/95*	Salem, Tamilnadu, India	1994	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/52/95*	Bhiwani, Haryana, India	1995	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/50/96*	Thane, Maharastra, India	1990	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/162/97*	Jalgaon, Maharastra, India	1997	Bovine	Ref. 16
ME-SA	Branch C-I	O/IND/279/97*	Nagaon, Assam, India	1997	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/289/97*	Howrah, West Bengal, India	1997	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/313/97*	Hisar, Haryana, India	1997	Bovine	Ref. 16
ME-SA	Branch A	O/IND/489/97*	Tamilnadu, India	1984	Not known	Ref. 16

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ME-SA	PanAsia	O/IND/31/98*	Jalpaiguri, West Bengal, India	1997	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/146/98*	Tumkur, Karnataka, India	1998	Porcine	Ref. 16
ME-SA	Branch C-I	O/IND/413/98*	Doddaballapura, Karnataka, India	1998	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/429/98*	Anantpur, Andhra Pradesh, India	1998	Bovine	Ref. 16
ME-SA	Branch C-I	O/IND/141/99*	Thirunelveli, Tamilnadu, India	1999	Buffalo	Ref. 16
ME-SA	PanAsia	O/IND/143/99*	Agra, Uttar Pradesh, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/209/99*	Ahmednagar, Maharashtra, India	1998	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/246/99*	Gujarat, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/5/00*	Kurnool, Andhra Pradesh, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/30/00*	Sirsa, Haryana, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/34/00*	Hisar, Haryana, India	2000	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/36/00*	Sirsa, Haryana, India	2000	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/43/00*	Chitradurga, Karnataka, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/45/00*	Doddaballapura, Karnataka, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/74/00*	Hassan, Karnataka, India	2000	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/75/00*	Arakalgudu, Karnataka, India	2000	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/77/00*	Arakalgudu, Karnataka, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/90/00*	Chitradurga, Karnataka, India	2000	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/91/00*	Chitradurga, Karnataka, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/111/00*	Howrah, West Bengal, India	1999	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/112/00*	Nadia, West Bengal, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/151/00*	Midnapore, West Bengal, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/156/00*	Nadia, West Bengal, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/157/00*	24 Parganas, West Bengal, India	2000	Bovine	Ref. 16
ME-SA	Iran2001	O/IND/398/00*	Surendra Nagar, Gujarat, India	2000	Not known	Ref. 16
ME-SA	Ind2001	O/IND/402/00*	Jam Nagar, Gujarat, India	2000	Not known	Ref. 16
ME-SA	Iran2001	O/IND/40/01*	Midnapore, West Bengal, India	2000	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/58/01*	Mahadevpur, Karnataka, India	2001	Bovine	Ref. 16

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ME-SA	Ind2001	O/IND/64/01*	Muzaffarnagar, Uttar Pradesh, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/78/01*	Hoshiarpur, Punjab, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/79/01*	Hoshiarpur, Punjab, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/83/01*	Mandya, Karnataka, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/86/01*	Kolar, Karnataka, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/93/01*	Kolar, Karnataka, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/96/01*	Ludhiana, Punjab, India	2001	Buffalo	Ref. 16
ME-SA	Ind2001	O/IND/97/01*	Ambala, Haryana, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/102/01*	Hatharas, Uttar Pradesh, India	2001	Buffalo	Ref. 16
ME-SA	Ind2001	O/IND/106/01*	Hisar, Haryana, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/111/01*	Gurgaon, Haryana, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/112/01*	Gurgaon, Haryana, India	2001	buffalo	Ref. 16
ME-SA	PanAsia	O/IND/115/01*	Kuruksetra, Haryana, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/116/01*	Narnaul, Haryana, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/118/01*	Jaipur, Rajasthan, India	2001	buffalo	Ref. 16
ME-SA	Ind2001	O/IND/119/01*	Karnal, Haryana, India	2001	Bovine	Ref. 16
ME-SA	Ind2001	O/IND/125/01*	Faridabad, Haryana, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/136/01*	Baruch, Gujarat, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/151/01*	Kutch, Gujarat, India	2001	Bovine	Ref. 16
ME-SA	PanAsia	O/IND/155/01*	Baruch, Gujarat, India	2001	Bovine	Ref. 16
ISA-1	-	O/ISA/1/62	Bali, Indonesia	Jul 1962	Bovine	AJ303500
ISA-2	-	O/JAV/5/72	Java, Indonesia	1972	Not known	AJ303509
ISA-2	-	O/ISA/1/74	Bali Quarantine Station, Indonesia	1974	Bovine	AJ303501
ISA-1	-	O/ISA/9/74	Bali, Indonesia	Oct 30, 1974	Bovine	AJ303502
ISA-1	-	O/ISA/8/83	East Java, Indonesia	1983	Bovine	AJ303503
ME-SA	PanAsia	O/IRL/134/2001	Louth, Republic of Ireland	Mar 20, 2001	Bovine	DQ164891†
ME-SA	PanAsia	O/IRN/9/99	Iran	1999	Not known	AJ318838†
ME-SA	PanAsia	O/IRN/24/99	Iran	1999	Not known	AJ318839†

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/IRN/1/2000	Ghotil, West Azarbijan, Mahabad, Iran	May 6, 2000	Bovine	DQ164892†
ME-SA	PanAsia	O/IRN/16/2000	Sardasht, W. Azerbaijan, Iran	Jun 28, 2000	Bovine	AJ318840†
ME-SA	PanAsia	O/IRN/16/2001	Shirin Abad, Markazy, Iran	Jul 9, 2001	Bovine	DQ164893†
ME-SA	PanAsia	O/IRN/41/2001	Oshnaveye, West Azar, Iran	Nov 14, 2001	Bovine	DQ164894†
ME-SA	PanAsia	O/IRN/58/2001	Dam Shahz, Qom, Iran	Nov 29, 2001	Bovine	DQ164895†
ME-SA	Iran2001	O/IRN/61/2001	Mynab, Hormozgan, Iran	Dec 15, 2001	Bovine	DQ164896†
ME-SA	PanAsia	O/IRN/67/2001	Zahedan, Systan, Iran	Dec 22, 2001	Bovine	DQ164897†
ME-SA	PanAsia	O/IRN/2/2003	Abaz Abad, West Azarbijan, Iran	Jan 3, 2003	Bovine	DQ165048
ME-SA	Iran2001	O/IRN/4/2003	Kahak, Qom, Iran	Jan 4, 2003	Bovine	DQ165049
ME-SA	Iran2001	O/IRN/6/2003	Hajiabad, Hormozgan, Iran	Jan 9, 2003	Bovine	DQ165050
ME-SA	Iran2001	O/IRN/8/2003	Sanandoj, Kordestan, Iran	Jan 15, 2003	Bovine	DQ165051
ME-SA	Iran2001	O/IRN/15/2003	Amol, Mazanderan, Iran	Apr 13, 2003	Not known	DQ164898†
ME-SA	PanAsia	O/IRN/16/2003	Gorgah, Golestan, Iran	Apr 14, 2003	Bovine	DQ165052
ME-SA	PanAsia	O/IRN/6/2004	Oshnavieh, W. Azerbaijan, Iran	Jul 11, 2004	Bovine	DQ165053
ME-SA	PanAsia	O/IRN/8/2004	Urmiah, W. Azarbaijan, Iran	Aug 17, 2004	Bovine	DQ165054
ME-SA	Iran2001	O/IRN/15/2004	Ardebil, Ardebil, Iran	Oct 3, 2004	Bovine	DQ165055
ME-SA	Iran2001	O/IRN/20/2004	Hosseiniabad, Fars, Shiraz, Iran	Oct 19, 2004	Bovine	DQ165056
ME-SA	PanAsia	O/IRQ/26/2000	Erbil, Iraq	Apr 9, 2000	Bovine	AJ318841†
ME-SA	PanAsia	O/IRQ/30/2000	Erbil, Iraq	Apr 9, 2000	Bovine	DQ165057
ME-SA	-	O/Geshur/ISR/85	Kibbutz Geshur, Galand, Israel	May 1985	Bovine	AF189157
ME-SA	-	O/ISR/2/88	Dalton, Zefat, Israel	Jun 24, 1988	Bovine	DQ164899†
ME-SA	PanAsia	O/ISR/2/2004	Hadaron, Israel	Jan 20, 2004	Bovine	DQ164900†
ME-SA	PanAsia	O/ISR/3/2004	Hadaron, Israel	Jan 22, 2004	Bovine	DQ164901†
ME-SA	PanAsia	O/ISR/4/2004	Hazafon, Israel	Jan 23, 2004	Bovine	DQ164902†
Euro-SA	-	O1/Lombardy/ITL/46	Lombardy, Italy	1946	Not known	M58601
Euro-SA	-	O2/Brescia/ITL/47	Brescia, Italy	1947	Not known	M55287
ME-SA	PanAsia	O/JPN/2000	Miyazaki, Japan	Apr 7, 2000	Bovine	AB079061
ME-SA	Iran2001	O/JOR/2/95	Amman Governorate, Jordan	Oct 30, 1995	Bovine	DQ164903†

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EA-1	-	O/K77/78*	Manera Est., Naivasha, Kenya	1978	Not known	DQ165072
EA-1	-	O/K83/79*	Mweiga, Nyeri Dist., Central Prov., Kenya	1979	Bovine	AJ303511
EA-2		O/KEN/5/2002	Nakuru, Lanet Division, Kenya	Oct 9, 2002	Bovine	DQ165073
ME-SA	Ind2001	O/KUW/3/97	Kuwait	1997	Bovine	DQ164904†
ME-SA	PanAsia	O/KUW/1/98	Warfra (Al Warfah), Kuwait	May 2, 1998	Bovine	DQ164905†
SEA	-	O/LAO/4/98	Attapeu, Laos	Sep 24, 1998	Buffalo	DQ164906†
ME-SA	PanAsia	O/LAO/2/2000	Kephathao, Sayabluly, Laos	Jan 26, 2000	Not known	AJ318844†
SEA	-	O/LAO/4/2001	Xieng Khouang, Laos	Aug 3, 2001	Bovine	DQ164907†
ME-SA	PanAsia	O/LAO/3/2003	Xaythany, VT Municipality, Laos	Mar 21, 2003	Bovine	DQ164908†
ME-SA	PanAsia	O/LAO/11/2003	Xaysettha, VT Municipality, Laos	May 12, 2003	Buffalo	DQ164909†
ME-SA	PanAsia	O/LAO/12/2003	Hatxaifong, VT Municipality, Laos	May 15, 2003	Bovine	DQ164910†
ME-SA	PanAsia	O/LAO/13/2003	Xaysettha, VT Municipality, Laos	May 16, 2003	Buffalo	DQ164911†
ME-SA	PanAsia	O/LAO/17/2003	Tonepheung, Borkeo, Laos	May 25, 2003	Buffalo	DQ164912†
ME-SA	PanAsia	O/LAO/19/2003	Tonepheung, Borkeo, Laos	May 27, 2003	Bovine	DQ164913†
ME-SA	PanAsia	O/LAO/21/2003	Chanthabuly, VT Municipality, Laos	Jun 25, 2003	Porcine	DQ164914†
ME-SA	PanAsia	O/LAO/23/2003	Chanthabuly, VT Municipality, Laos	Jun 26, 2003	Porcine	DQ164915†
ME-SA	PanAsia	O/LAO/28/2003	Thaphabath, Borikhamxai, Laos	Sep 16, 2003	Bovine	DQ164916†
ME-SA	PanAsia	O/LAO/30/2003	Thaphabath, Borikhamxai, Laos	Oct 4, 2003	Porcine	DQ164917†
ME-SA	PanAsia	O/LAO/31/2003	Thaphabath, Borikhamxai, Laos	Oct 4, 2003	Porcine	DQ164918†
ME-SA	PanAsia	O/LEB/1/2003	Lebanon	Mar 26, 2003	Bovine	DQ164919†
EA-2	-	O/MAL/1/98	Mwongulukulu dip tank, Karonga, Northern Malawi	Nov 6, 1998	Not known	DQ165074
ME-SA	PanAsia	O/MAY/2/2000	Kilang Papan, Batu Arang, Selangor, Malaysia	Jan 2, 2000	Bovine	AJ318846†
SEA	-	O/MAY/3/2001	S.G Kelambu Kuala Langat, Selangor, Malaysia	Jun 23, 2001	Bovine	DQ164920†
SEA	-	O/MAY/5/2001	Twluk Jering, Kelantan, Tumpat, Malaysia	Jul 11, 2001	Bovine	DQ164921†
SEA	-	O/MAY/6/2001	Twluk Jering, Kelantan, Tumpat, Malaysia	Jul 11, 2001	Bovine	DQ164922†
SEA	-	O/MAY/1/2002	Pengkala Huln, Perak, Malaysia	Jan 10, 2002	Bovine	DQ164923†
ME-SA	PanAsia	O/MAY/6/2003	Rompin, Pahang, Malaysia	Dec 28, 2003	Bovine	DQ165058
SEA	-	O/MYA/13/89	Kyaik Latt, Myanmar	Jul 20, 1989	Bovine	DQ164924†

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SEA	-	O/MYA/7/98	U Uin Myint, Warr Ta Ya, Htan Ta Pin, Yangon, Myanmar	Jul 14, 1998	Bovine	DQ164925†
SEA	-	O/MYA/5/99	U Khin Win, Tha Pyay Sein, Zigon, Bago, Myanmar	Jun 8, 1999	Bovine	DQ164926†
SEA	-	O/MYA/2/2000	Kant Malar, Yangon, Kungyaw Kone, Myanmar	May 23, 2000	Bovine	DQ164927†
SEA	-	O/MYA/7/2002	Hlayhlaninn, Hlegu, Yangon, Myanmar	Oct 23, 2002	Porcine	DQ164928†
ME-SA	PanAsia	O/NEP/111/90	Kathmandu, Nepal	May 17, 1990	Porcine	DQ164929†
ME-SA	PanAsia	O/NEP/121/90	Bhojpur, Nepal	Sep 23, 1990	Bovine	DQ164930†
ME-SA		O/NEP/6/91	Kathmandu, Nepal	Jun 5, 1991	Bovine	DQ164931†
ME-SA		O/NEP/4/92	Kathmandu, Nepal	Oct 22, 1992	Bovine	DQ164932†
ME-SA	PanAsia	O/NEP/104/97	k.b. Budhathoki, Kathmandu, Nepal	Oct 16, 1997	Bovine	DQ164933†
ME-SA	PanAsia	O/NEP/109/97	Okhaldhunga, Nepal	Nov 30, 1997	buffalo	DQ164934†
ME-SA	PanAsia	O/NEP/4/98	Kathmandu, Nepal	Apr 30, 1998	Porcine	DQ164935†
ME-SA	PanAsia	O/NEP/9/98	Lalitpur, Nepal	Oct 4, 1998	Bovine	DQ164936†
ME-SA	PanAsia	O/NEP/2/99	Pyuthan, Nepal	Jan 4, 1999	Bovine	DQ164937†
ME-SA	-	O/NEP/12/2000	Kathmandu, Nepal	Jun 14, 2000	Bovine	DQ164938†
ME-SA	-	O/NEP/13/2000	Kathmandu, Nepal	Jun 14, 2000	Bovine	DQ164939†
ME-SA	PanAsia	O/NEP/4/2003	Lalitpur, Nepal	May 9, 2003	Bovine	DQ165059
ME-SA	PanAsia	O/NEP/5/2003	Gagalghed 1-7, Kathmandu, Nepal	May 29, 2003	Bovine	DQ165060
ME-SA	PanAsia	O/NEP/6/2003	Gagalghed 1-7, Kathmandu, Nepal	Jun 9, 2003	Bovine	DQ165061
ME-SA	Ind2001	O/OMN/4/2001	Oman	2001	Caprine	DQ164940†
ME-SA	Ind2001	O/OMN/7/2001	Oman	2001	Bovine	DQ164941†
ME-SA	Iran2001	O/PAK/15/2002	Sheikh Pura, Punjab, Pakistan	Mar 15, 2002	Buffalo	DQ165062
ME-SA	Iran2001	O/PAK/16/2002	Pakistan	Mar 15, 2002	Bovine	DQ165063
ME-SA	Iran2001	O/PAK/18/2002	Karachi, Pakistan	Jul 27, 2002	Bovine	DQ165064
ME-SA	Iran2001	O/PAK/1/2003	Karachi, Pakistan	Jan 6, 2003	Bovine	DQ165065
ME-SA	Pak98	O/PAK/12/2003	Lahore, Punjab, Pakistan	2003	Not known	DQ165066
ME-SA	Pak98	O/PAK/14/2003	Lahore, Punjab, Pakistan	2003	Not known	DQ165067
ME-SA	Pak98	O/PAK/16/2003	Lahore, Punjab, Pakistan	2003	Not known	DQ165068
ME-SA	Pak98	O/PAK/17/2003	Lahore, Punjab, Pakistan	2003	Not known	DQ165069

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/PAK/45/2003	Pakistan	May 19, 2003	Bovine	DQ164942†
ME-SA	Iran2001	O/PAK/53/2003	Pakistan	May 27, 2003	Buffalo	DQ164943†
ME-SA	Pak98	O/PAK/73/2003	Pakistan	Oct 27, 2003	Not known	DQ165070
ME-SA	Ind2001	O/PAT/2/2002	Deir Dibwan, Ramallah, Palestinian Autonomous Territories	2002	Bovine	DQ164944†
ME-SA	Ind2001	O/PAT/3/2002	Nr. Ramallah, Palestinian Autonomous Territories	Nov 12, 2002	Bovine	DQ164945†
Cathay	-	O/PHI/5/95	Bauang, La Union, Philippines	Feb 9, 1995	Porcine	DQ164946†
Cathay	-	O/PHI/7/96	Mahabang Parang, Angono, Rizal, Philippines	Nov 1, 1996	Porcine	AJ294926
Cathay	-	O/PHI/5/2000	(Cabanatuan), 111, Nueva Ecija, Philippines	Feb 8, 2000	Porcine	DQ164947†
Cathay	-	O/PHI/13/2000	Staana, 111, Pampanga, Philippines	Mar 2, 2000	Porcine	DQ164948†
Cathay	-	O/PHI/14/2000	Vicotria, 1V, Oriental Mindoro, Philippines	Mar 11, 2000	Porcine	DQ164949†
Cathay	-	O/PHI/5/2003	Bangued, CAR, Abra, Philippines	Feb 10, 2003	Porcine	DQ164950†
Cathay	-	O/PHI/10/2003	Muntinlupa City, NCR, Muntinlupa, Philippines	Mar 4, 2003	Porcine	DQ164951†
Cathay	-	O/PHI/17/2003	Guagua, 111, Pampanga, Philippines	Apr 8, 2003	Porcine	DQ164952†
Cathay	-	O/PHI/21/2003	Antipolo City, 1V, Rizal, Philippines	May 13, 2003	Porcine	DQ164953†
Cathay	-	O/PHI/23/2003	Cainta, 1V, Rizal, Philippines	May 15, 2003	Porcine	DQ164954†
Cathay	-	O/PHI/1/2004	Cabaroandaya, 1, Vigan Ilocos Sur, Philippines	Jan 13, 2004	Porcine	DQ164955†
Cathay	-	O/PHI/2/2004	Guagua, II, Pampanga, Philippines	Jan 16, 2004	Porcine	DQ164956†
Cathay	-	O/PHI/3/2004	Quezon City, NCR, Metro Manila, Philippines	Jan 5, 2004	Porcine	DQ164957†
Cathay	-	O/PHI/4/2004	Tondo, NCR, Metro Manila, Philippines	Mar 24, 2004	Porcine	DQ164958†
Cathay	-	O/PHI/5/2004	Pinagbuhatan, NCR, Pasig City, Philippines	Jun 1, 2004	Porcine	DQ164959†
Cathay	-	O/PHI/6/2004	Caloocan City, NCR, Metro Manila, Philippines	Jun 21, 2004	Porcine	DQ164960†
Cathay	-	O/PHI/7/2004	Gerona, III, Tarlac, Philippines	Jun 29, 2004	Porcine	DQ164961†
Cathay	-	O/PHI/8/2004	Guiguinto, III, Bulacan, Philippines	Jul 14, 2004	Porcine	DQ164962†
Cathay	-	O/PHI/9/2004	Mayamot, Antipolo, IV B, Rizal, Philippines	Jul 21, 2004	Porcine	DQ164963†
Cathay	-	O/PHI/10/2004	NCR, Quezon City, Philippines	Aug 4, 2004	Porcine	DQ164964†
Cathay	-	O/PHI/11/2004	Muntinlupa, NCR, Metro Manila, Philippines	Sep 3, 2004	Porcine	DQ164965†
Cathay	-	O/PHI/12/2004	Binan, IV B, Laguna, Philippines	Sep 29, 2004	Porcine	DQ164966†
ME-SA	PanAsia	O/QTR/3/99	Al-Wabra, Wildlife Preservation, Dohar, Qatar	Feb 27, 1999	Dorcas gazelle	DQ164967†

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/SAR/1/2000	Camperdown, Kwazulu-Natal, South Africa	Sep 2000	Porcine	AJ318860†
ME-SA	-	O/SAU/2/97	Riyadh, Saudi Arabia	May 1997	Bovine	AJ318851†
ME-SA	PanAsia	O/SAU/38/98	Al-Kharj, Saudi Arabia	1998	Bovine	AJ318852†
ME-SA	PanAsia	O/SAU/2/99	Saudi Arabia	1999	Not known	DQ164968†
ME-SA	Ind2001	O/SAU/3/2001	Asier, Saudi Arabia	Mar 2001	Bovine	DQ164969†
ME-SA	Ind2001	O/SAU/11/2001	Al Karj, Saudi Arabia	Jan 2001	Bovine	DQ164970†
ME-SA	PanAsia	O/SAU/13/2001	Almaria, Riyadh, Saudi Arabia	Oct 12, 2001	Bovine	DQ164971†
ME-SA	PanAsia	O/SKR/1/2000	Papyung, P'aju City, Kyunggi, Republic of Korea	Mar 26, 000	Bovine	AJ318854†
ME-SA	PanAsia	O/SKR/2000	ChungJu county, Kyunggi province, Republic of Korea	May 2000	Bovine	AJ539139
ME-SA	PanAsia	O/SKR/2000	Republic of Korea	2000	Not known	AF377945
ME-SA	PanAsia	O/SKR/2000	Republic of Korea	2000	Not known	AF428246
ME-SA	PanAsia	O/SKR/1/2002	Samjuk, Anseong, Kyonggi province, Republic of Korea	May 2, 2002	Porcine	DQ164972†
ME-SA	PanAsia	O/SKR/AS/2002	Samjuk, Anseong, Kyonggi province, Republic of Korea	2002	Porcine	AY114146
EA-3	-	O/SUD/2/86	Omdurman, Khartoum, Sudan	Nov 17, 1986	Bovine	DQ165075
EA-3	-	O/SUD/1/99	Sudan	1999	Not known	DQ165076
ME-SA	PanAsia	O/SYR/1/2002	Syria	Feb 2002	Not known	DQ164973†
ME-SA	PanAsia	O/SYR/2/2002	Syria	Feb 2002	Not known	DQ164974†
ME-SA	PanAsia	O/SYR/3/2002	Syria	Feb 2002	Not known	DQ164975†
SEA	-	O/TAI/4/99	Mae Hong Son, Thailand	Mar 1999	Bovine	DQ164976†
SEA	-	O/TAI/8/99	Buriram, Thailand	Jun 1999	Bovine	DQ164977†
ME-SA	PanAsia	O/TAI/9/99	Chieng Rai, Thailand	Jun 1999	Bovine	DQ164978†
SEA	-	O/TAI/2/2000	Songkhla, Thailand	Jan 18, 2000	Bovine	DQ164979†
ME-SA	PanAsia	O/TAI/2/2003	Nakhon Ratchasima, Thailand	Mar 10, 2003	Bovine	DQ164980†
SEA	-	O/TAI/3/2003	Nakompathom, Thailand	May 19, 2003	Porcine	DQ164981†
Cathay	-	O/TAW/81/97	I-lan, Taiwan POC	17/04/1997	Porcine	AJ296321
ME-SA	PanAsia	O/TAW/2/99	Kinmen, Taiwan POC	Jun 1999	Bovine	AJ294927
Cathay	-	O/TAW/4/99	Penghu Island, Taiwan POC	Feb 1999	Porcine	AJ294928
ME-SA	Branch B	O1/Manisa/TUR/69	Manisa, Turkey	Apr 1969	Bovine	AJ251477

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	Iran2001	O/TUR/2/2000	Merlez, Balikesir, Turkey	2000	Bovine	DQ164982†
ME-SA	PanAsia	O/TUR/5/2000	Nigde, Turkey	2000	Bovine	DQ164983†
ME-SA	PanAsia	O/TUR/8/2000	Konya, Turkey	2000	Bovine	DQ164984†
ME-SA	PanAsia	O/TUR/2/2001	Kastamonu, Kastamonu, Turkey	Jan 26, 2001	Bovine	DQ164985†
ME-SA	PanAsia	O/TUR/3/2002	Diyarbakir, Diyarbakir, Turkey	2002	Bovine	DQ164986†
ME-SA	Iran2001	O/TUR/5/2002	Sivas, Sivas, Turkey	2002	Bovine	DQ164987†
ME-SA	PanAsia	O/TUR/12/2002	Dozansehir, Malatya, Turkey	May 2002	Bovine	DQ164988†
ME-SA	PanAsia	O/TUR/1/2003	Aksaray, Turkey	2003	Bovine	DQ164989†
ME-SA	PanAsia	O/TUR/3/2003	Amasya, Turkey	2003	Bovine	DQ164990†
ME-SA	PanAsia	O/TUR/7/2003	Nigde, Turkey	2003	Bovine	DQ164991†
ME-SA	Ind2001	O/UAE/7/97	Al Ain, United Arab Emirates	May 1997	Bovine	DQ164992†
ME-SA	PanAsia	O/UAE/4/99	United Arab Emirates	1999	Antelope	DQ164993†
ME-SA	PanAsia	O/UAE/1/2000	Al Rawabi, Dubai, United Arab Emirates	May 6, 2000	Bovine	DQ164994†
ME-SA	PanAsia	O/UAE/2/2000	Al Rawabi, Dubai, United Arab Emirates	May 6, 2000	Bovine	DQ164995†
ME-SA	PanAsia	O/UAE/3/2000	Al Rawabi, Dubai, United Arab Emirates	May 6, 2000	Bovine	DQ164996†
ME-SA	Ind2001	O/UAE/6/2001	Al Ain, United Arab Emirates	Mar 2001	Bovine	DQ164997†
EA-2	-	O/UGA/3/2002	Nakasongola, Uganda	2002	Not known	DQ165077
ME-SA	PanAsia	O/UKG/12/2001	Brentwood, Essex, UK.	Feb 19, 2001	Porcine	AJ311724
ME-SA	PanAsia	O/UKG/31/2001	Brentwood, Essex, UK.	Feb 20, 2001	Bovine	DQ164998†
ME-SA	PanAsia	O/UKG/35/2001	Brentwood, Essex, UK.	Feb 20, 2001	Porcine	AJ539141
ME-SA	PanAsia	O/UKG/123/2001	Brentwood, Essex, UK.	Feb 22, 2001	Bovine	DQ164999†
ME-SA	PanAsia	O/UKG/128/2001	Heddon-on-the-Wall, Northumberland, UK.	Feb 22, 2001	Porcine	DQ165000†
ME-SA	PanAsia	O/UKG/130/2001	Canewdon, Essex, UK.	Feb 22, 2001	Porcine	DQ165001†
ME-SA	PanAsia	O/UKG/150/2001	Ponteland, Northumberland, UK.	Feb 23, 2001	Bovine	DQ165002†
ME-SA	PanAsia	O/UKG/152/2001	Ponteland, Northumberland, UK.	Feb 23, 2001	Bovine	DQ165003†
ME-SA	PanAsia	O/UKG/174/2001	Beaworthy, Highamton, Devon, UK.	Feb 24, 2001	Bovine	DQ165004†
ME-SA	PanAsia	O/UKG/195/2001	Bromham, Chippenham, Wiltshire, UK.	Feb 2001	Bovine	DQ165005†
ME-SA	PanAsia	O/UKG/198/2001	Burdon, Hatherleigh, Okehampton, Devon, UK.	Feb 25, 2001	Bovine	DQ165006†

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/UKG/240/2001	Llangarron, Ross-on-Wye, Herefordshire, UK.	Feb 26, 2001	Bovine	DQ165007†
ME-SA	PanAsia	O/UKG/241/2001	Llangarron, Ross-on-Wye, Herefordshire, UK.	Feb 26, 2001	Bovine	DQ165008†
ME-SA	PanAsia	O/UKG/438/2001	County Armagh, Northern Ireland, UK.	Feb 28, 2001	Bovine	DQ165009†
ME-SA	PanAsia	O/UKG/478/2001	Dryfesdale, Lockerbie, Dumfries & Galloway, UK.	Feb 28, 2001	Bovine	DQ165010†
ME-SA	PanAsia	O/UKG/3730/2001	Bogues, Ecclefechan, Lockerbie, Dumfries & Galloway, UK.	Mar 30, 2001	Not known	DQ165011†
ME-SA	PanAsia	O/UKG/3802/2001	Milton Damerel, Holsworthy, Devon, UK.	Mar 30, 2001	Bovine	DQ165012†
ME-SA	PanAsia	O/UKG/4021/2001	Cockermouth, Cumbria, UK.	Apr 1, 2001	Bovine	DQ165013†
ME-SA	PanAsia	O/UKG/4027/2001	Hawes, North Yorkshire, UK.	Mar 29, 2001	Bovine	DQ165014†
ME-SA	PanAsia	O/UKG/4553/2001	Jedburgh, Borders, UK.	Apr 6, 2001	Bovine	DQ165015†
ME-SA	PanAsia	O/UKG/5060/2001	Coagh, County Tyrone, Northern Ireland, UK.	Apr 11, 2001	Bovine	DQ165016†
ME-SA	PanAsia	O/UKG/5565/2001	Cushendall, County Antrim, Northern Ireland, UK.	Apr 14, 2001	Bovine	DQ165017†
ME-SA	PanAsia	O/UKG/9359/2001	Crathorne, Yarm, North Yorkshire, UK.	May 16, 2001	Bovine	DQ165018†
ME-SA	PanAsia	O/UKG/13726/2001	Abram, Wigan, Lancashire, UK	Jul 16, 2001	Bovine	DQ165019†
Euro-SA	-	O3/VEN/51	Venezuela	1951	Not known	AJ004645
SEA	-	O/VIT/2/97	Vietnam	1997	Bovine	AJ294929
Cathay	-	O/VIT/3/97	Vietnam	1997	Porcine	AJ294930
SEA	-	O/VIT/7/97	Uar, Krong Pa, Gialai, Region no. 37, Vietnam	Aug 31, 1997	Not known	AJ296328
ME-SA	PanAsia	O/VIT/6/2002	Vietnam	2002	Not known	DQ165020†
ME-SA	PanAsia	O/VIT/8/2002	Vietnam	2002	Not known	DQ165021†
ME-SA	PanAsia	O/VIT/9/2002	Vietnam	2002	Not known	DQ165022†
ME-SA	PanAsia	O/VIT/10/2002	Vietnam	2002	Not known	DQ165023†
ME-SA	PanAsia	O/VIT/12/2002	Vietnam	2002	Not known	DQ165024†
Cathay	-	O/VIT/13/2002	Vietnam	2002	Not known	DQ165025†
ME-SA	PanAsia	O/VIT/14/2002	Kien Giang, Vietnam	Feb 2002	Porcine	DQ165026†
ME-SA	PanAsia	O/VIT/16/2002	Kien Giang, Vietnam	Mar 2002	Porcine	DQ165027†
ME-SA	PanAsia	O/VIT/19/2002	Kontum, Vietnam	Jun 2002	Bovine	DQ165028†
ME-SA	PanAsia	O/VIT/20/2002	Binh Thuan, Vietnam	Dec 2002	Bovine	DQ165029†
ME-SA	PanAsia	O/VIT/1/2003	Phu Yen, Vietnam	2003	Porcine	DQ165030†

Topotype	Strain	Virus designation	Geographic origin	Date	Species	Database
ME-SA	PanAsia	O/VIT/2/2003	An Giang, Vietnam	Aug 2003	Porcine	DQ165031†
ME-SA	PanAsia	O/VIT/1/2004	Kon Tum, Vietnam	Feb 2004	Bovine	DQ165032†
Cathay	-	O/VIT/2/2004	Quang Nam, Vietnam	Feb 2004	Porcine	DQ165033†
Cathay	-	O/VIT/3/2004	Quang Nam, Vietnam	Mar 2004	Porcine	DQ165034†

*Not a reference number of the World Reference Laboratory for Foot-and-Mouth Disease.

†Sequence determined in this study.