

Supplementary Data

Supplementary Tables

Supplementary Table S1. Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|-------------|----------|--------------------------|
| JX198113 | Tracy | 1987 | USA | GA1 | 1 |
| KJ723467 | RSVA/Homo sapiens/USA/86I-044A-01/1986 | 1986 | USA | GA1 | Das, S.R. et al. |
| KJ723474 | RSVA/Homo sapiens/USA/89I-123A-01/1989 | 1989 | USA | GA1 | Das, S.R. et al. |
| KJ723475 | RSVA/Homo sapiens/USA/86I-139A-01/1986 | 1986 | USA | GA1 | Das, S.R. et al. |
| KJ723478 | RSVA/Homo sapiens/USA/82I-158A-01/1982 | 1982 | USA | GA1 | Das, S.R. et al. |
| KJ723489 | RSVA/Homo sapiens/USA/90I-283A-01/1990 | 1990 | USA | GA1 | Das, S.R. et al. |
| KP258695 | RSVA/Homo sapiens/USA/88E-072-01/1988 | 1988 | USA | GA1 | Das, S.R. et al. |
| KP258717 | RSVA/Homo sapiens/USA/94E-091-01/1994 | 1994 | USA | GA1 | Das, S.R. et al. |
| KP258719 | RSVA/Homo sapiens/USA/88E-082-01/1988 | 1988 | USA | GA1 | Das, S.R. et al. |
| KP258729 | RSVA/Homo sapiens/USA/90P-147-01/1990 | 1990 | USA | GA1 | Das, S.R. et al. |
| KP258741 | RSVA/Homo sapiens/USA/90E-112-01/1990 | 1990 | USA | GA1 | Das, S.R. et al. |
| KP258744 | RSVA/Homo sapiens/USA/95P-073-01/1995 | 1995 | USA | GA1 | Das, S.R. et al. |
| KU316103 | RSVA/Homo sapiens/USA/83G-012-01/1983 | 1983 | USA | GA1 | Das, S.R. et al. |
| KU316106 | RSVA/Homo sapiens/USA/78I-004A-01-01/1977 | 1977 | USA | GA1 | Das, S.R. et al. |
| KU316107 | RSVA/Homo sapiens/USA/95P-071-01/1995 | 1995 | USA | GA1 | Das, S.R. et al. |
| KU316109 | RSVA/Homo sapiens/USA/92I-109A-01-01/1992 | 1992 | USA | GA1 | Das, S.R. et al. |
| KU316119 | RSVA/Homo sapiens/USA/89E-503-01/1989 | 1989 | USA | GA1 | Das, S.R. et al. |
| KU316120 | RSVA/Homo sapiens/USA/86I-024A-01-01/1985 | 1985 | USA | GA1 | Das, S.R. et al. |
| KU316123 | RSVA/Homo sapiens/USA/97I-058A-01-01/1997 | 1997 | USA | GA1 | Das, S.R. et al. |
| KU316124 | RSVA/Homo sapiens/USA/92I-050A-01-01/1992 | 1992 | USA | GA1 | Das, S.R. et al. |
| KU316140 | RSVA/Homo sapiens/USA/78I-046A-01-01/1978 | 1978 | USA | GA1 | Das, S.R. et al. |
| KU316146 | RSVA/Homo sapiens/USA/83G-002-01/1983 | 1983 | USA | GA1 | Das, S.R. et al. |
| KU316152 | RSVA/Homo sapiens/USA/85P-399-01/1985 | 1985 | USA | GA1 | Das, S.R. et al. |
| KU316153 | RSVA/Homo sapiens/USA/88E-042-01/1988 | 1988 | USA | GA1 | Das, S.R. et al. |
| KU316162 | RSVA/Homo sapiens/USA/88E-033-01/1988 | 1988 | USA | GA1 | Das, S.R. et al. |
| KU316164 | RSVA/Homo sapiens/USA/95P-326-01/1995 | 1995 | USA | GA1 | Das, S.R. et al. |
| KU316165 | RSVA/Homo sapiens/USA/88I-141A-01-01/1987 | 1987 | USA | GA1 | Das, S.R. et al. |
| KU316168 | RSVA/Homo sapiens/USA/78I-026A-01-01/1977 | 1977 | USA | GA1 | Das, S.R. et al. |
| KU316171 | RSVA/Homo sapiens/USA/78I-016A-01-01/1977 | 1977 | USA | GA1 | Das, S.R. et al. |
| KU316174 | RSVA/Homo sapiens/USA/88I-095A-01-01/1987 | 1987 | USA | GA1 | Das, S.R. et al. |
| MF361904 | MON/9/92 | 1992 | Uruguay | GA1 | 2 |
| MG642060 | RSVA/Homo sapiens/USA/MCRSV_211/1980 | 1980 | USA | GA1 | Shabman, R. et al. |
| MG642067 | RSVA/Homo sapiens/USA/MCRSV_254/1987 | 1987 | USA | GA1 | Shabman, R. et al. |
| MG642075 | RSVA/Homo sapiens/USA/MCRSV_248/1986 | 1986 | USA | GA1 | Shabman, R. et al. |
| MG813989 | A-TX-Tracy-1989-WGS | 1989 | USA | GA1 | Piedra, F.-A. et al. |
| JF920057 | A/WI/629-4239/98 | 1998 | USA | GA2 | 3 |
| JQ901447 | 01-000312 | 2001 | Netherlands | GA2 | 4 |
| JQ901452 | 01-031282 | 2001 | Netherlands | GA2 | 4 |
| JQ901453 | 02-000110 | 2002 | Netherlands | GA2 | 4 |
| JQ901457 | 03-036456 | 2003 | Netherlands | GA2 | 4 |
| JQ901458 | 03-036544 | 2003 | Netherlands | GA2 | 4 |
| JX015480 | 07-040054 | 2007 | Netherlands | GA2 | 4 |
| JX015486 | 05-000417 | 2005 | Netherlands | GA2 | 4 |

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|----------|-------------------------------------|------|-----------|-----|--------------------|
| JX069799 | RSVA/human/USA/A2001-03-12/2001/GA2 | 2001 | USA | GA2 | Lorenzi, H. et al. |
| JX198105 | TX-79309 | 2005 | USA | GA2 | 1 |
| JX198108 | TX-79321 | 2005 | USA | GA2 | 1 |
| JX198110 | TX-79334 | 2005 | USA | GA2 | 1 |
| JX198120 | TX-79223 | 2004 | USA | GA2 | 1 |
| JX198126 | TX-79256 | 2004 | USA | GA2 | 1 |
| JX198128 | TX-79258 | 2004 | USA | GA2 | 1 |
| JX198131 | TX-79299 | 2005 | USA | GA2 | 1 |
| JX198134 | TX-79308 | 2005 | USA | GA2 | 1 |
| KF826848 | RSVA/Homo sapiens/AUS/249/2007 | 2007 | Australia | GA2 | Lorenzi, H. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|---------|----------|--------------------------|
| KJ627248 | RSVA/Homo sapiens/PER/FLA6927/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627255 | RSVA/Homo sapiens/PER/FLA6533/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627260 | RSVA/Homo sapiens/PER/FLA0756/2008 | 2008 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627276 | RSVA/Homo sapiens/PER/FLA6891/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627284 | RSVA/Homo sapiens/PER/FLA7779/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627289 | RSVA/Homo sapiens/PER/FLA7440/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627305 | RSVA/Homo sapiens/PER/FLU5848/2007 | 2007 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627311 | RSVA/Homo sapiens/PER/FLA2268/2008 | 2008 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627314 | RSVA/Homo sapiens/PER/FLA7464/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627324 | RSVA/Homo sapiens/PER/FLA6757/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627327 | RSVA/Homo sapiens/PER/FLU7450/2007 | 2007 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627336 | RSVA/Homo sapiens/PER/FLA0535/2008 | 2008 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627339 | RSVA/Homo sapiens/PER/FLA6331/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627352 | RSVA/Homo sapiens/PER/FLU5725/2007 | 2007 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627353 | RSVA/Homo sapiens/PER/FLA0489/2008 | 2008 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627361 | RSVA/Homo sapiens/PER/FLU5529/2007 | 2007 | Peru | GA2 | Wentworth, D.E. et al. |
| KJ627366 | RSVA/Homo sapiens/PER/FLA6758/2009 | 2009 | Peru | GA2 | Wentworth, D.E. et al. |
| KP317933 | Kilifi_10891_51_RSVA_2008 | 2008 | Kenya | GA2 | 5 |
| KP317937 | Kilifi_10891_59_RSVA_2007 | 2007 | Kenya | GA2 | 5 |
| KP317942 | Kilifi_10891_57_RSVA_2006 | 2006 | Kenya | GA2 | 5 |
| KP317944 | Kilifi_9696_45_RSVA_2006 | 2006 | Kenya | GA2 | 5 |
| KP317950 | Kilifi_10899_38_RSVA_2009 | 2009 | Kenya | GA2 | 5 |
| KP856968 | RSVA/Homo sapiens/USA/98I-003A-01/1998 | 1998 | USA | GA2 | Das, S.R. et al. |
| KU316091 | RSVA/Homo sapiens/USA/98I-005A-01-01/1998 | 1998 | USA | GA2 | Das, S.R. et al. |
| KU316141 | RSVA/Homo sapiens/USA/98E-126-01/1998 | 1998 | USA | GA2 | Das, S.R. et al. |
| LC337816 | HRSV/Yokohama.JPN/V13828/1996 | 1996 | Japan | GA2 | Saikusa, M. et al. |
| LC337817 | HRSV/Yokohama.JPN/V13835/1996 | 1996 | Japan | GA2 | Saikusa, M. et al. |
| LC337818 | HRSV/Yokohama.JPN/V13933/1997 | 1997 | Japan | GA2 | Saikusa, M. et al. |
| LC337820 | HRSV/Yokohama.JPN/V14040/1997 | 1997 | Japan | GA2 | Saikusa, M. et al. |
| LC337821 | HRSV/Yokohama.JPN/V14140/1997 | 1997 | Japan | GA2 | Saikusa, M. et al. |
| LC337823 | HRSV/Yokohama.JPN/V14179/1997 | 1997 | Japan | GA2 | Saikusa, M. et al. |
| LC337833 | HRSV/Yokohama.JPN/V14835/1997 | 1997 | Japan | GA2 | Saikusa, M. et al. |
| LC337842 | HRSV/Yokohama.JPN/P203/1999 | 1999 | Japan | GA2 | Saikusa, M. et al. |
| LC337892 | HRSV/Yokohama.JPN/P2363/2003 | 2003 | Japan | GA2 | Saikusa, M. et al. |
| LC337914 | HRSV/Yokohama.JPN/P3200/2005 | 2005 | Japan | GA2 | Saikusa, M. et al. |
| LC337917 | HRSV/Yokohama.JPN/P3587/2006 | 2006 | Japan | GA2 | Saikusa, M. et al. |
| LC337918 | HRSV/Yokohama.JPN/P3623/2006 | 2006 | Japan | GA2 | Saikusa, M. et al. |
| LC337919 | HRSV/Yokohama.JPN/P3688/2007 | 2007 | Japan | GA2 | Saikusa, M. et al. |
| LC365787 | HRSV/Yokohama.JPN/P3941/2007 | 2007 | Japan | GA2 | Saikusa, M. et al. |
| LC365789 | HRSV/Yokohama.JPN/P4073/2007 | 2007 | Japan | GA2 | Saikusa, M. et al. |
| LC365792 | HRSV/Yokohama.JPN/P4101/2007 | 2007 | Japan | GA2 | Saikusa, M. et al. |
| LC365795 | HRSV/Yokohama.JPN/P4388/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365797 | HRSV/Yokohama.JPN/P4403/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365799 | HRSV/Yokohama.JPN/P4422/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365801 | HRSV/Yokohama.JPN/P4427/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365803 | HRSV/Yokohama.JPN/P4432/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365815 | HRSV/Yokohama.JPN/P4487/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| LC365816 | HRSV/Yokohama.JPN/P4494/2008 | 2008 | Japan | GA2 | Saikusa, M. et al. |
| MF445965 | FJ081103-01 | 2008 | China | GA2 | Su, Y. et al. |

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|----------|--------------|------|-------|-----|---------------|
| MF445966 | FJ090104-33 | 2009 | China | GA2 | Su, Y. et al. |
| MF445967 | FJ090302-03 | 2009 | China | GA2 | Su, Y. et al. |
| MF445968 | FJ101224-40 | 2010 | China | GA2 | Su, Y. et al. |
| MF445969 | FJ101118-01 | 2010 | China | GA2 | Su, Y. et al. |
| MF445970 | FJ101225-02 | 2010 | China | GA2 | Su, Y. et al. |
| MF445971 | FJ101011-37 | 2010 | China | GA2 | Su, Y. et al. |
| MF445972 | FJ101011-38 | 2010 | China | GA2 | Su, Y. et al. |
| MF445973 | FJ101213-49 | 2010 | China | GA2 | Su, Y. et al. |
| MF445974 | FJ091113-21A | 2009 | China | GA2 | Su, Y. et al. |
| MF445975 | FJ091221-01A | 2009 | China | GA2 | Su, Y. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|-------------|----------|--------------------------|
| FJ948820 | 98-25147-X | 1999 | Netherlands | GA3 | 6 |
| JX069798 | RSVA/human/USA/A2001-02-20/2001/GA2 | 2001 | USA | GA3 | Lorenzi, H. et al. |
| JX682716 | CQ_Mar-2012/3155 | 2012 | China | GA3 | 7 |
| JX682745 | CQ_Dec-2010/1148 | 2010 | China | GA3 | 7 |
| KJ627647 | RSV-A/US/BID-V8313/2001 | 2001 | USA | GA3 | Newman, R.M. et al. |
| KJ627681 | RSV-A/US/BID-V8425/2001 | 2001 | USA | GA3 | Newman, R.M. et al. |
| KP119746 | HRSV-A-GZ08-12 | 2012 | Hong Kong | GA3 | 8 |
| KP218910 | HRSV-A-GZ08-0 | 2008 | China | GA3 | 8 |
| KU316118 | RSVA/Homo sapiens/USA/961-029A-01-01/1996 | 1996 | USA | GA3 | Das, S.R. et al. |
| KU316139 | RSVA/Homo sapiens/USA/941-091A-01-01/1994 | 1994 | USA | GA3 | Das, S.R. et al. |
| KU950573 | RSVA/Homo sapiens/USA/TH_10681/2006 | 2006 | USA | GA3 | Das, S.R. et al. |
| KY296708 | BJ04-01 | 2004 | China | GA3 | 9 |
| KY296709 | BJ04-23 | 2004 | China | GA3 | 9 |
| KY296710 | BJ04-32 | 2004 | China | GA3 | 9 |
| KY296711 | BJ04-34 | 2004 | China | GA3 | 9 |
| KY296712 | BJ04-44 | 2004 | China | GA3 | 9 |
| KY296715 | BJ_09-105 | 2005 | China | GA3 | 9 |
| KY296718 | BJ_10-02 | 2005 | China | GA3 | 9 |
| KY296747 | GZ11-18 | 2005 | China | GA3 | 9 |
| KY296751 | GZ11-21 | 2005 | China | GA3 | 9 |
| LC337812 | HRSV/Yokohama.JPN/V10831/1992 | 1992 | Japan | GA3 | Saikusa, M. et al. |
| LC337819 | HRSV/Yokohama.JPN/V13968/1997 | 1997 | Japan | GA3 | Saikusa, M. et al. |
| LC337824 | HRSV/Yokohama.JPN/V14337/1997 | 1997 | Japan | GA3 | Saikusa, M. et al. |
| LC337830 | HRSV/Yokohama.JPN/V14823/1997 | 1997 | Japan | GA3 | Saikusa, M. et al. |
| LC337875 | HRSV/Yokohama.JPN/P1419/2001 | 2001 | Japan | GA3 | Saikusa, M. et al. |
| LC337897 | HRSV/Yokohama.JPN/P2746/2004 | 2004 | Japan | GA3 | Saikusa, M. et al. |
| MG642033 | RSVA/Homo sapiens/USA/MCRSV_265/1994 | 1994 | USA | GA3 | Shabman, R. et al. |
| MG642050 | RSVA/Homo sapiens/USA/MCRSV_261/1994 | 1994 | USA | GA3 | Shabman, R. et al. |
| JX198137 | TX-37425 | 1987 | USA | GA4 | 1 |
| KJ723486 | RSVA/Homo sapiens/USA/79I-039A-01/1979 | 1979 | USA | GA4 | Das, S.R. et al. |
| KJ723488 | RSVA/Homo sapiens/USA/81I-123A-01/1981 | 1981 | USA | GA4 | Das, S.R. et al. |
| KP258696 | RSVA/Homo sapiens/USA/86E-155-01/1986 | 1986 | USA | GA4 | Das, S.R. et al. |
| KP258704 | RSVA/Homo sapiens/USA/94I-009A-01/1994 | 1994 | USA | GA4 | Das, S.R. et al. |
| KP258715 | RSVA/Homo sapiens/USA/88E-009-01/1988 | 1988 | USA | GA4 | Das, S.R. et al. |
| KP856969 | RSVA/Homo sapiens/USA/79E-495-01/1979 | 1979 | USA | GA4 | Das, S.R. et al. |
| KU316135 | RSVA/Homo sapiens/USA/81I-090A-01-01/1981 | 1981 | USA | GA4 | Das, S.R. et al. |
| KU316137 | RSVA/Homo sapiens/USA/79E-040-01/1979 | 1979 | USA | GA4 | Das, S.R. et al. |
| KU316143 | RSVA/Homo sapiens/USA/82G-164-01/1982 | 1982 | USA | GA4 | Das, S.R. et al. |
| KU316149 | RSVA/Homo sapiens/USA/81E-078-01/1977 | 1977 | USA | GA4 | Das, S.R. et al. |
| KU316150 | RSVA/Homo sapiens/USA/78G-168-01/1978 | 1978 | USA | GA4 | Das, S.R. et al. |
| KU316157 | RSVA/Homo sapiens/USA/79I-050A-01-01/1979 | 1979 | USA | GA4 | Das, S.R. et al. |
| KU316178 | RSVA/Homo sapiens/USA/79E-191-01/1979 | 1979 | USA | GA4 | Das, S.R. et al. |
| MG642028 | RSVA/Homo sapiens/USA/MCRSV_220/1980 | 1980 | USA | GA4 | Shabman, R. et al. |
| MG642040 | RSVA/Homo sapiens/USA/MCRSV_214/1980 | 1980 | USA | GA4 | Shabman, R. et al. |
| MG642074 | RSVA/Homo sapiens/USA/MCRSV_209/1980 | 1980 | USA | GA4 | Shabman, R. et al. |
| JQ901448 | 01-000583 | 2001 | Netherlands | GA5 | 4 |
| JQ901449 | 01-000868 | 2001 | Netherlands | GA5 | 4 |
| JQ901450 | 01-002215 | 2001 | Netherlands | GA5 | 4 |
| JQ901451 | 01-002279 | 2001 | Netherlands | GA5 | 4 |

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|----------|---------------------------------|------|-------------|-----|--------------------|
| JQ901454 | 02-00291 | 2002 | Netherlands | GA5 | 4 |
| JQ901455 | 02-017863 | 2002 | Netherlands | GA5 | 4 |
| JQ901456 | 03-033338 | 2003 | Netherlands | GA5 | 4 |
| JX015485 | 05-000257 | 2005 | Netherlands | GA5 | 4 |
| JX015487 | 06-000103 | 2006 | Netherlands | GA5 | 4 |
| JX015488 | 06-000827 | 2006 | Netherlands | GA5 | 4 |
| JX069803 | RSVA/human/USA/A2000-03-04/2000 | 2000 | USA | GA5 | Lorenzi, H. et al. |
| JX198106 | TX-79310 | 2005 | USA | GA5 | 1 |
| JX198109 | TX-79326 | 2005 | USA | GA5 | 1 |
| JX198111 | TX-79365 | 2005 | USA | GA5 | 1 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-------------------------------------|-----------------|-----------|----------|--------------------------|
| JX198114 | TX-50106 | 1991 | USA | GA5 | 1 |
| JX198115 | TX-50437 | 1991 | USA | GA5 | 1 |
| JX198116 | TX-61245 | 1993 | USA | GA5 | 1 |
| JX198117 | TX-79216 | 2004 | USA | GA5 | 1 |
| JX198118 | TX-79218 | 2004 | USA | GA5 | 1 |
| JX198119 | TX-79219 | 2004 | USA | GA5 | 1 |
| JX198121 | TX-79228 | 2004 | USA | GA5 | 1 |
| JX198122 | TX-79230 | 2004 | USA | GA5 | 1 |
| JX198123 | TX-79240 | 2004 | USA | GA5 | 1 |
| JX198124 | TX-79248 | 2004 | USA | GA5 | 1 |
| JX198125 | TX-79254 | 2004 | USA | GA5 | 1 |
| JX198127 | TX-79257 | 2004 | USA | GA5 | 1 |
| JX198129 | TX-79285 | 2004 | USA | GA5 | 1 |
| JX198133 | TX-79306 | 2005 | USA | GA5 | 1 |
| JX198135 | TX-68357 | 1994 | USA | GA5 | 1 |
| JX198139 | TX-66125 | 1994 | USA | GA5 | 1 |
| KC618407 | 9278 | 2007 | Italy | GA5 | Piralla, A. et al. |
| KF530260 | RSVA/Homo sapiens/ARG/170/2005 | 2005 | Argentina | GA5 | Lorenzi, H. et al. |
| KF530268 | RSVA/Homo sapiens/MEX/59/2007 | 2007 | Mexico | GA5 | Lorenzi, H. et al. |
| KF826816 | RSVA/Homo sapiens/MEX/25/2005 | 2005 | Mexico | GA5 | Lorenzi, H. et al. |
| KF826823 | RSVA/Homo sapiens/USA/629-4360/1998 | 1998 | USA | GA5 | Lorenzi, H. et al. |
| KF826824 | RSVA/Homo sapiens/USA/629-4392/1998 | 1998 | USA | GA5 | Lorenzi, H. et al. |
| KF826826 | RSVA/Homo sapiens/MEX/23/2004 | 2004 | Mexico | GA5 | Lorenzi, H. et al. |
| KF826827 | RSVA/Homo sapiens/ARG/159/2004 | 2004 | Argentina | GA5 | Lorenzi, H. et al. |
| KF826828 | RSVA/Homo sapiens/ARG/162/2004 | 2004 | Argentina | GA5 | Lorenzi, H. et al. |
| KF826832 | RSVA/Homo sapiens/ITA/120/2009 | 2009 | Italy | GA5 | Lorenzi, H. et al. |
| KF826836 | RSVA/Homo sapiens/MEX/26/2006 | 2006 | Mexico | GA5 | Lorenzi, H. et al. |
| KF826837 | RSVA/Homo sapiens/MEX/27/2006 | 2006 | Mexico | GA5 | Lorenzi, H. et al. |
| KF826841 | RSVA/Homo sapiens/ARG/190/2007 | 2007 | Argentina | GA5 | Lorenzi, H. et al. |
| KF826846 | RSVA/Homo sapiens/ARG/202/2008 | 2008 | Argentina | GA5 | Lorenzi, H. et al. |
| KF826847 | RSVA/Homo sapiens/AUS/248/2007 | 2007 | Australia | GA5 | Lorenzi, H. et al. |
| KF826850 | RSVA/Homo sapiens/USA/629-11-1/2008 | 2008 | USA | GA5 | Lorenzi, H. et al. |
| KF826852 | RSVA/Homo sapiens/USA/629-1/2007 | 2007 | USA | GA5 | Lorenzi, H. et al. |
| KF826854 | RSVA/Homo sapiens/ITA/119/2009 | 2009 | Italy | GA5 | Lorenzi, H. et al. |
| KF973332 | RSV-A/US/BID-V7349/2002 | 2002 | USA | GA5 | 10 |
| KF973340 | RSV-A/US/BID-V7359/2002 | 2002 | USA | GA5 | 10 |
| KJ627649 | RSV-A/US/BID-V8316/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627652 | RSV-A/US/BID-V8320/2002 | 2002 | USA | GA5 | Newman, R.M. et al. |
| KJ627654 | RSV-A/US/BID-V8323/2002 | 2002 | USA | GA5 | Newman, R.M. et al. |
| KJ627656 | RSV-A/US/BID-V8352/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627662 | RSV-A/US/BID-V8372/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627664 | RSV-A/US/BID-V8376/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627668 | RSV-A/US/BID-V8384/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627671 | RSV-A/US/BID-V8405/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627675 | RSV-A/US/BID-V8415/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627676 | RSV-A/US/BID-V8419/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627679 | RSV-A/US/BID-V8423/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627684 | RSV-A/US/BID-V8434/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627687 | RSV-A/US/BID-V8437/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |

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|----------|-------------------------|------|-----|-----|---------------------|
| KJ627690 | RSV-A/US/BID-V8456/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627693 | RSV-A/US/BID-V8466/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627696 | RSV-A/US/BID-V8471/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627701 | RSV-A/US/BID-V8477/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627707 | RSV-A/US/BID-V8486/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627709 | RSV-A/US/BID-V8491/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627710 | RSV-A/US/BID-V8493/2001 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627717 | RSV-A/US/BID-V8509/2003 | 2001 | USA | GA5 | Newman, R.M. et al. |
| KJ627722 | RSV-A/US/BID-V8523/2004 | 2004 | USA | GA5 | Newman, R.M. et al. |
| KJ627725 | RSV-A/US/BID-V8526/2004 | 2004 | USA | GA5 | Newman, R.M. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|----------|----------|--------------------------|
| KJ627729 | RSV-A/US/BID-V8537/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627731 | RSV-A/US/BID-V8540/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ627733 | RSV-A/US/BID-V8547/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| KJ641590 | RSV-A/US/BID-V9458/2012 | 2012 | USA | GA5 | Newman, R.M. et al. |
| KJ643492 | RSV-A/US/BID-V9411/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643493 | RSV-A/US/BID-V9412/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643498 | RSV-A/US/BID-V9419/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643504 | RSV-A/US/BID-V9427/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643529 | RSV-A/US/BID-V9463/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643548 | RSV-A/US/BID-V9489/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643560 | RSV-A/US/BID-V9507/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643561 | RSV-A/US/BID-V9510/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643585 | RSV-A/US/BID-V9553/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ643586 | RSV-A/US/BID-V9554/2013 | 2013 | USA | GA5 | Newman, R.M. et al. |
| KJ672462 | RSVA/Homo sapiens/USA/LA2_84/2013 | 2013 | USA | GA5 | Das, S. et al. |
| KJ672474 | RSVA/Homo sapiens/USA/LA2_38/2012 | 2012 | USA | GA5 | Das, S. et al. |
| KJ672479 | RSVA/Homo sapiens/USA/LA2_18/2013 | 2013 | USA | GA5 | Das, S. et al. |
| KJ672483 | RSVA/Homo sapiens/USA/LA2_19/2013 | 2013 | USA | GA5 | Das, S. et al. |
| KJ723462 | RSVA/Homo sapiens/USA/92I-068A-01/1992 | 1992 | USA | GA5 | Das, S. et al. |
| KJ723465 | RSVA/Homo sapiens/USA/92I-094A-01/1992 | 1992 | USA | GA5 | Das, S. et al. |
| KJ723473 | RSVA/Homo sapiens/USA/90I-229A-01/1990 | 1990 | USA | GA5 | Das, S. et al. |
| KJ723490 | RSVA/Homo sapiens/USA/92I-048A-01/1992 | 1992 | USA | GA5 | Das, S. et al. |
| KJ939943 | VN-360-6/10 | 2010 | Viet Nam | GA5 | 11 |
| KJ939948 | VN-391-7/10 | 2010 | Viet Nam | GA5 | 11 |
| KP258701 | RSVA/Homo sapiens/USA/94E-014-01/1994 | 1994 | USA | GA5 | Das, S.R. et al. |
| KP258703 | RSVA/Homo sapiens/USA/97I-009A-01/1997 | 1997 | USA | GA5 | Das, S.R. et al. |
| KP258707 | RSVA/Homo sapiens/USA/95P-047-01/1995 | 1995 | USA | GA5 | Das, S.R. et al. |
| KP258710 | RSVA/Homo sapiens/USA/91E-611-01/1991 | 1991 | USA | GA5 | Das, S.R. et al. |
| KP258722 | RSVA/Homo sapiens/USA/93E-014-01/1993 | 1993 | USA | GA5 | Das, S.R. et al. |
| KP258726 | RSVA/Homo sapiens/USA/96E-128-01/1996 | 1996 | USA | GA5 | Das, S.R. et al. |
| KP258727 | RSVA/Homo sapiens/USA/97E-101-01/1997 | 1997 | USA | GA5 | Das, S.R. et al. |
| KP258728 | RSVA/Homo sapiens/USA/92E-024-01/1992 | 1992 | USA | GA5 | Das, S.R. et al. |
| KP258732 | RSVA/Homo sapiens/USA/91E-597-01/1991 | 1991 | USA | GA5 | Das, S.R. et al. |
| KP258740 | RSVA/Homo sapiens/USA/93E-065-01/1993 | 1993 | USA | GA5 | Das, S.R. et al. |
| KP317949 | Kilifi_11866_65_RSVA_2003 | 2003 | Kenya | GA5 | 5 |
| KP317956 | Kilifi_11865_75_RSVA_2004 | 2004 | Kenya | GA5 | 5 |
| KU316096 | RSVA/Homo sapiens/USA/96E-016-01/1996 | 1996 | USA | GA5 | Das, S.R. et al. |
| KU316104 | RSVA/Homo sapiens/USA/91P-516-01/1991 | 1991 | USA | GA5 | Das, S.R. et al. |
| KU316121 | RSVA/Homo sapiens/USA/92E-015-01/1992 | 1992 | USA | GA5 | Das, S.R. et al. |
| KU316145 | RSVA/Homo sapiens/USA/96E-033-01/1996 | 1996 | USA | GA5 | Das, S.R. et al. |
| KU316176 | RSVA/Homo sapiens/USA/90I-184A-01-01/1990 | 1990 | USA | GA5 | Das, S.R. et al. |
| KU316180 | RSVA/Homo sapiens/USA/98E-415-01/1998 | 1998 | USA | GA5 | Das, S.R. et al. |
| KU950473 | RSVA/Homo sapiens/USA/TH_10346/2012 | 2012 | USA | GA5 | Das, S.R. et al. |
| KU950479 | RSVA/Homo sapiens/USA/TH_10180/2012 | 2012 | USA | GA5 | Das, S.R. et al. |
| KU950487 | RSVA/Homo sapiens/USA/TH_10334/2012 | 2012 | USA | GA5 | Das, S.R. et al. |
| KU950501 | RSVA/Homo sapiens/USA/TH_10212/2013 | 2013 | USA | GA5 | Das, S.R. et al. |
| KU950561 | RSVB/Homo sapiens/USA/TH_10667/2006 | 2006 | USA | GA5 | Das, S.R. et al. |
| KU950564 | RSVA/Homo sapiens/USA/TH_10234/2012 | 2012 | USA | GA5 | Das, S.R. et al. |
| KU950616 | RSVA/Homo sapiens/USA/TH_10226/2012 | 2012 | USA | GA5 | Das, S.R. et al. |

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|----------|------------------------------------|------|-------------|-----|------------------------|
| KX765891 | RSVA/Homo sapiens/NZL/LJRSV44/2013 | 2013 | New Zealand | GA5 | Shabman, R. et al. |
| KX765933 | RSVA/Homo sapiens/NZL/LJRSV58/2012 | 2012 | New Zealand | GA5 | Shabman, R. et al. |
| KY296713 | BJ_08-04 | 2005 | China | GA5 | 9 |
| KY296716 | BJ_09-55 | 2005 | China | GA5 | 9 |
| KY296767 | HuN13-10 | 2013 | China | GA5 | 9 |
| KY967364 | SC2632 | 2015 | USA | GA5 | Greninger, A.L. et al. |
| LC337813 | HRSV/Yokohama.JPN/V11519/1993 | 1993 | Japan | GA5 | Saikusa, M. et al. |
| LC337814 | HRSV/Yokohama.JPN/V12340/1995 | 1995 | Japan | GA5 | Saikusa, M. et al. |
| LC337815 | HRSV/Yokohama.JPN/V12391/1995 | 1995 | Japan | GA5 | Saikusa, M. et al. |
| LC337834 | HRSV/Yokohama.JPN/P74/1999 | 1999 | Japan | GA5 | Saikusa, M. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|-----------|----------|--------------------------|
| LC337835 | HRSV/Yokohama.JPN/P121/1999 | 1999 | Japan | GA5 | Saikusa, M. et al. |
| LC337838 | HRSV/Yokohama.JPN/P182/1999 | 1999 | Japan | GA5 | Saikusa, M. et al. |
| LC337845 | HRSV/Yokohama.JPN/P208/1999 | 1999 | Japan | GA5 | Saikusa, M. et al. |
| LC337847 | HRSV/Yokohama.JPN/P225/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337848 | HRSV/Yokohama.JPN/P302/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337849 | HRSV/Yokohama.JPN/P337/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337850 | HRSV/Yokohama.JPN/P841/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337852 | HRSV/Yokohama.JPN/P881/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337855 | HRSV/Yokohama.JPN/P909/2000 | 2000 | Japan | GA5 | Saikusa, M. et al. |
| LC337856 | HRSV/Yokohama.JPN/P936/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337859 | HRSV/Yokohama.JPN/P1255/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337860 | HRSV/Yokohama.JPN/P1298/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337864 | HRSV/Yokohama.JPN/P1361/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337867 | HRSV/Yokohama.JPN/P1371/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337868 | HRSV/Yokohama.JPN/P1376/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337871 | HRSV/Yokohama.JPN/P1401/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337873 | HRSV/Yokohama.JPN/P1407/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337874 | HRSV/Yokohama.JPN/P1416/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337876 | HRSV/Yokohama.JPN/P1426/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337877 | HRSV/Yokohama.JPN/P1427/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337884 | HRSV/Yokohama.JPN/P1451/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337885 | HRSV/Yokohama.JPN/P1452/2001 | 2001 | Japan | GA5 | Saikusa, M. et al. |
| LC337887 | HRSV/Yokohama.JPN/P1891/2002 | 2002 | Japan | GA5 | Saikusa, M. et al. |
| LC337888 | HRSV/Yokohama.JPN/P1905/2002 | 2002 | Japan | GA5 | Saikusa, M. et al. |
| LC337890 | HRSV/Yokohama.JPN/P1924/2002 | 2002 | Japan | GA5 | Saikusa, M. et al. |
| LC337891 | HRSV/Yokohama.JPN/P2037/2003 | 2003 | Japan | GA5 | Saikusa, M. et al. |
| LC337893 | HRSV/Yokohama.JPN/P2710/2004 | 2004 | Japan | GA5 | Saikusa, M. et al. |
| LC337903 | HRSV/Yokohama.JPN/P2769/2004 | 2004 | Japan | GA5 | Saikusa, M. et al. |
| LC337905 | HRSV/Yokohama.JPN/P2785/2004 | 2004 | Japan | GA5 | Saikusa, M. et al. |
| LC337906 | HRSV/Yokohama.JPN/P2790/2004 | 2004 | Japan | GA5 | Saikusa, M. et al. |
| LC337907 | HRSV/Yokohama.JPN/P2791/2004 | 2004 | Japan | GA5 | Saikusa, M. et al. |
| LC337909 | HRSV/Yokohama.JPN/P3151/2005 | 2005 | Japan | GA5 | Saikusa, M. et al. |
| LC365790 | HRSV/Yokohama.JPN/P4094/2007 | 2007 | Japan | GA5 | Saikusa, M. et al. |
| MF001038 | 1D1 | 2015 | USA | GA5 | Greninger, A.L. et al. |
| MF978512 | RSVA-CAP-9/BJ/2014 | 2015 | China | GA5 | 12 |
| MF978625 | RSVA-WZ-131/ZJ/2015 | 2015 | China | GA5 | 12 |
| MG027862 | RSV-A/US/BID-V8392/2003 | 2003 | USA | GA5 | Newman, R.M. et al. |
| MG642048 | RSVA/Homo sapiens/USA/MCRSV_258/1990 | 1990 | USA | GA5 | Shabman, R. et al. |
| MG642052 | RSVA/Homo sapiens/USA/MCRSV_263/1994 | 1994 | USA | GA5 | Shabman, R. et al. |
| MG642055 | RSVA/Homo sapiens/USA/MCRSV_259/1990 | 1990 | USA | GA5 | Shabman, R. et al. |
| MG642061 | RSVA/Homo sapiens/USA/MCRSV_262/1994 | 1994 | USA | GA5 | Shabman, R. et al. |
| MH760599 | A/NSW/WM2955A/10 | 2010 | Australia | GA5 | 13 |
| KP258723 | RSVA/Homo sapiens/USA/86E-007-01/1986 | 1986 | USA | GA6 | Das, S.R. et al. |
| KP258733 | RSVA/Homo sapiens/USA/84E-004-01/1984 | 1984 | USA | GA6 | Das, S.R. et al. |
| KU316125 | RSVA/Homo sapiens/USA/84I-266A-01-01/1984 | 1984 | USA | GA6 | Das, S.R. et al. |
| KU316138 | RSVA/Homo sapiens/USA/87E-083-01/1987 | 1987 | USA | GA6 | Das, S.R. et al. |
| MG642063 | RSVA/Homo sapiens/USA/MCRSV_226/1982 | 1982 | USA | GA6 | Shabman, R. et al. |
| MG642070 | RSVA/Homo sapiens/USA/MCRSV_247/1986 | 1986 | USA | GA6 | Shabman, R. et al. |
| JF920062 | A/WI/629-3248/98 | 1998 | USA | GA7 | 3 |

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|----------|--|------|-----|-----|--------------------|
| JF920065 | A/WI/629-4071/98 | 1998 | USA | GA7 | 3 |
| JX069800 | RSVA/human/USA/A1997-12-35/1997 | 1997 | USA | GA7 | Lorenzi, H. et al. |
| JX069801 | RSVA/human/USA/A1998-03-02/1998 | 1998 | USA | GA7 | Lorenzi, H. et al. |
| JX198132 | TX-79303 | 2005 | USA | GA7 | 1 |
| KJ723464 | RSVA/Homo sapiens/USA/89I-150A-01/1989 | 1989 | USA | GA7 | Das, S.R. et al. |
| KJ723492 | RSVA/Homo sapiens/USA/90I-226A-01/1990 | 1990 | USA | GA7 | Das, S.R. et al. |
| KP258700 | RSVA/Homo sapiens/USA/85E-107-01/1985 | 1985 | USA | GA7 | Das, S.R. et al. |
| KP258734 | RSVA/Homo sapiens/USA/89E-024-01/1989 | 1989 | USA | GA7 | Das, S.R. et al. |
| KP258737 | RSVA/Homo sapiens/USA/84E-016-01/1984 | 1984 | USA | GA7 | Das, S.R. et al. |
| KP258743 | RSVA/Homo sapiens/USA/98E-027-01/1998 | 1998 | USA | GA7 | Das, S.R. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|--------------|----------|--------------------------|
| KU316092 | RSVA/Homo sapiens/USA/91E-610-01/1991 | 1991 | USA | GA7 | Das, S.R. et al. |
| KU316110 | RSVA/Homo sapiens/USA/84I-220A-01-01/1984 | 1984 | USA | GA7 | Das, S.R. et al. |
| KU316167 | RSVA/Homo sapiens/USA/85I-040A-01-01/1985 | 1985 | USA | GA7 | Das, S.R. et al. |
| LC337825 | HRSV/Yokohama.JPN/V14460/1997 | 1997 | Japan | GA7 | Saikusa, M. et al. |
| LC337827 | HRSV/Yokohama.JPN/V14761/1997 | 1997 | Japan | GA7 | Saikusa, M. et al. |
| LC337828 | HRSV/Yokohama.JPN/V14775/1997 | 1997 | Japan | GA7 | Saikusa, M. et al. |
| LC337831 | HRSV/Yokohama.JPN/V14824/1997 | 1997 | Japan | GA7 | Saikusa, M. et al. |
| LC337832 | HRSV/Yokohama.JPN/V14827/1997 | 1997 | Japan | GA7 | Saikusa, M. et al. |
| LC337836 | HRSV/Yokohama.JPN/P158/1999 | 1999 | Japan | GA7 | Saikusa, M. et al. |
| LC337839 | HRSV/Yokohama.JPN/P191/1999 | 1999 | Japan | GA7 | Saikusa, M. et al. |
| LC337841 | HRSV/Yokohama.JPN/P200/1999 | 1999 | Japan | GA7 | Saikusa, M. et al. |
| LC337843 | HRSV/Yokohama.JPN/P206/1999 | 1999 | Japan | GA7 | Saikusa, M. et al. |
| LC337844 | HRSV/Yokohama.JPN/P207/1999 | 1999 | Japan | GA7 | Saikusa, M. et al. |
| LC337851 | HRSV/Yokohama.JPN/P850/2000 | 2000 | Japan | GA7 | Saikusa, M. et al. |
| LC337853 | HRSV/Yokohama.JPN/P889/2000 | 2000 | Japan | GA7 | Saikusa, M. et al. |
| LC337857 | HRSV/Yokohama.JPN/P946/2001 | 2001 | Japan | GA7 | Saikusa, M. et al. |
| LC337889 | HRSV/Yokohama.JPN/P1919/2002 | 2002 | Japan | GA7 | Saikusa, M. et al. |
| LC337899 | HRSV/Yokohama.JPN/P2762/2004 | 2004 | Japan | GA7 | Saikusa, M. et al. |
| LC337900 | HRSV/Yokohama.JPN/P2765/2004 | 2004 | Japan | GA7 | Saikusa, M. et al. |
| LC337901 | HRSV/Yokohama.JPN/P2766/2004 | 2004 | Japan | GA7 | Saikusa, M. et al. |
| LC337916 | HRSV/Yokohama.JPN/P3233/2005 | 2005 | Japan | GA7 | Saikusa, M. et al. |
| MG642030 | RSVA/Homo sapiens/USA/MCRSV_256/1988 | 1988 | USA | GA7 | Shabman, R. et al. |
| MG642034 | RSVA/Homo sapiens/USA/MCRSV_244/1985 | 1985 | USA | GA7 | Shabman, R. et al. |
| AB848366 | BPH-12-069 | 2012 | Philippines | NA1 | Okamoto, M. et al. |
| AB848369 | BPH-13-025 | 2013 | Philippines | NA1 | Okamoto, M. et al. |
| AB848370 | ONP-12-144 | 2012 | Philippines | NA1 | Okamoto, M. et al. |
| AB848371 | ONP-12-175 | 2012 | Philippines | NA1 | Okamoto, M. et al. |
| AB848372 | ONP-12-188 | 2012 | Philippines | NA1 | Okamoto, M. et al. |
| AB848373 | ONP-13-005 | 2013 | Philippines | NA1 | Okamoto, M. et al. |
| AB848374 | ONP-13-008 | 2013 | Philippines | NA1 | Okamoto, M. et al. |
| JF714709 | Riyadh 1/2008 | 2008 | Saudi Arabia | NA1 | Farrag, M.A. et al. |
| JF714710 | Riyadh 91/2009 | 2009 | Saudi Arabia | NA1 | Farrag, M.A. et al. |
| JF920046 | A/WI/629-2/07 | 2007 | USA | NA1 | 3 |
| JF920047 | A/WI/629-23/08 | 2008 | USA | NA1 | 3 |
| JF920048 | A/WI/629-9-2/07 | 2007 | USA | NA1 | 3 |
| JF920049 | A/WI/629-22/07 | 2007 | USA | NA1 | 3 |
| JF920054 | A/WI/629-Q0282/10 | 2010 | USA | NA1 | 3 |
| JX015479 | 11-000271 | 2011 | Netherlands | NA1 | 4 |
| JX015481 | 09-000457 | 2009 | Netherlands | NA1 | 4 |
| JX015482 | BE06-6650 | 2006 | Belgium | NA1 | 4 |
| JX015483 | 08-047045 | 2008 | Netherlands | NA1 | 4 |
| JX015490 | RSV597 | 2007 | Netherlands | NA1 | 4 |
| JX015493 | 08-000507 | 2008 | Netherlands | NA1 | 4 |
| JX015494 | 08-001411 | 2008 | Netherlands | NA1 | 4 |
| JX015495 | 08-042544 | 2008 | Netherlands | NA1 | 4 |
| JX015496 | 08-042735 | 2008 | Netherlands | NA1 | 4 |
| JX015497 | 08-044640 | 2008 | Netherlands | NA1 | 4 |
| JX015498 | 08-046972 | 2008 | Netherlands | NA1 | 4 |
| JX015499 | BE08-5146 | 2008 | Belgium | NA1 | 4 |

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|----------|-----------------|------|-------|-----|---|
| JX482019 | CQ_Jan-2012(8) | 2012 | China | NA1 | 7 |
| JX482020 | CQ_Jan-2012(4) | 2012 | China | NA1 | 7 |
| JX482021 | CQ_Jan-2012(19) | 2012 | China | NA1 | 7 |
| JX482022 | CQ_Jan-2012(18) | 2012 | China | NA1 | 7 |
| JX482023 | CQ_Jan-2012(15) | 2012 | China | NA1 | 7 |
| JX482024 | CQ_Jan-2012(14) | 2012 | China | NA1 | 7 |
| JX482025 | CQ_Jan-2012(13) | 2012 | China | NA1 | 7 |
| JX482026 | CQ_Jan-2012(12) | 2012 | China | NA1 | 7 |
| JX482027 | CQ_Jan-2012(11) | 2012 | China | NA1 | 7 |
| JX482028 | CQ_Jan-2012(10) | 2012 | China | NA1 | 7 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|------------------|-----------------|-------------|----------|--------------------------|
| JX482029 | CQ_Jan-2012(1) | 2012 | China | NA1 | 7 |
| JX482030 | CQ_Dec-2011(27) | 2011 | China | NA1 | 7 |
| JX482031 | CQ_Dec-2011(25) | 2011 | China | NA1 | 7 |
| JX482032 | CQ_Dec-2011(23) | 2011 | China | NA1 | 7 |
| JX482034 | CQ_Dec-2011(21) | 2011 | China | NA1 | 7 |
| JX482035 | CQ_Dec-2011(18) | 2011 | China | NA1 | 7 |
| JX482036 | CQ_Dec-2011(17) | 2011 | China | NA1 | 7 |
| JX482037 | CQ_Dec-2011(16) | 2011 | China | NA1 | 7 |
| JX482038 | CQ_Dec-2011(15) | 2011 | China | NA1 | 7 |
| JX627336 | RSVA/GN435/11 | 2011 | South Korea | NA1 | 14 |
| JX682715 | CQ_Mar-2012/3163 | 2012 | China | NA1 | 7 |
| JX682717 | CQ_Mar-2012/3174 | 2012 | China | NA1 | 7 |
| JX682718 | CQ_Apr-2012/3229 | 2012 | China | NA1 | 7 |
| JX682719 | CQ_Oct-2011/2251 | 2011 | China | NA1 | 7 |
| JX682720 | CQ_Oct-2011/2310 | 2011 | China | NA1 | 7 |
| JX682721 | CQ_Oct-2011/2315 | 2011 | China | NA1 | 7 |
| JX682722 | CQ_Oct-2011/2319 | 2011 | China | NA1 | 7 |
| JX682723 | CQ_Nov-2011/2348 | 2011 | China | NA1 | 7 |
| JX682724 | CQ_Nov-2011/2353 | 2011 | China | NA1 | 7 |
| JX682726 | CQ_Dec-2011/2580 | 2011 | China | NA1 | 7 |
| JX682727 | CQ_Dec-2011/2587 | 2011 | China | NA1 | 7 |
| JX682733 | CQ_Jan-2012/2792 | 2012 | China | NA1 | 7 |
| JX682734 | CQ_Jan-2012/2848 | 2012 | China | NA1 | 7 |
| JX682735 | CQ_Jan-2012/2881 | 2012 | China | NA1 | 7 |
| JX682736 | CQ_Jan-2012/2904 | 2012 | China | NA1 | 7 |
| JX682737 | CQ_Jan-2012/2907 | 2012 | China | NA1 | 7 |
| JX682738 | CQ_Jan-2012/2947 | 2012 | China | NA1 | 7 |
| JX682739 | CQ_Feb-2012/2992 | 2012 | China | NA1 | 7 |
| JX682740 | CQ_Sep-2010/857 | 2012 | China | NA1 | 7 |
| JX682741 | CQ_Oct-2010/996 | 2010 | China | NA1 | 7 |
| JX682744 | CQ_Dec-2010/1146 | 2010 | China | NA1 | 7 |
| JX682746 | CQ_Dec-2010/1178 | 2010 | China | NA1 | 7 |
| JX682749 | CQ_Dec-2010/1200 | 2010 | China | NA1 | 7 |
| JX682751 | CQ_Jan-2011/1231 | 2011 | China | NA1 | 7 |
| JX682752 | CQ_Jan-2011/1275 | 2011 | China | NA1 | 7 |
| JX682753 | CQ_Jan-2011/1282 | 2011 | China | NA1 | 7 |
| JX682754 | CQ_Feb-2011/1366 | 2011 | China | NA1 | 7 |
| JX682756 | CQ_Feb-2011/1373 | 2011 | China | NA1 | 7 |
| JX682757 | CQ_Feb-2011/1399 | 2011 | China | NA1 | 7 |
| JX682758 | CQ_Mar-2011/1434 | 2011 | China | NA1 | 7 |
| JX682759 | CQ_Mar-2011/1437 | 2011 | China | NA1 | 7 |
| JX682760 | CQ_Mar-2011/1442 | 2011 | China | NA1 | 7 |
| JX682762 | CQ_Mar-2011/1455 | 2011 | China | NA1 | 7 |
| JX682763 | CQ_Mar-2011/1465 | 2011 | China | NA1 | 7 |
| JX682766 | CQ_Apr-2011/1555 | 2011 | China | NA1 | 7 |
| JX682767 | CQ_Apr-2011/1642 | 2011 | China | NA1 | 7 |
| JX682768 | CQ_Apr-2011/1643 | 2011 | China | NA1 | 7 |
| JX682769 | CQ_May-2011/1685 | 2011 | China | NA1 | 7 |
| JX682770 | CQ_May-2011/1712 | 2011 | China | NA1 | 7 |

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|----------|------------------|------|-------|-----|---|
| JX682772 | CQ_May-2011/1748 | 2011 | China | NA1 | 7 |
| JX682773 | CQ_May-2011/1762 | 2011 | China | NA1 | 7 |
| JX682774 | CQ_Jun-2011/1795 | 2011 | China | NA1 | 7 |
| JX682775 | CQ_Jun-2011/1827 | 2011 | China | NA1 | 7 |
| JX682777 | CQ_Jun-2011/1868 | 2011 | China | NA1 | 7 |
| JX682778 | CQ_Jul-2011/1920 | 2011 | China | NA1 | 7 |
| JX682779 | CQ_Jul-2011/1925 | 2011 | China | NA1 | 7 |
| JX682781 | CQ_Jul-2011/1940 | 2011 | China | NA1 | 7 |
| JX682782 | CQ_Sep-2011/2111 | 2011 | China | NA1 | 7 |
| JX682783 | CQ_Sep-2011/2118 | 2011 | China | NA1 | 7 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|--|-----------------|-----------|----------|--------------------------|
| JX682784 | CQ_Sep-2011/2147 | 2011 | China | NA1 | 7 |
| JX682785 | CQ_Oct-2011/2208 | 2011 | China | NA1 | 7 |
| JX682789 | CQ_Oct-2011/2247 | 2011 | China | NA1 | 7 |
| JX682790 | CQ_Nov-2011/2362 | 2011 | China | NA1 | 7 |
| JX682791 | CQ_Nov-2011/2379 | 2011 | China | NA1 | 7 |
| JX682792 | CQ_Nov-2011/2384 | 2011 | China | NA1 | 7 |
| JX682795 | CQ_Dec-2011/2626 | 2011 | China | NA1 | 7 |
| JX682796 | CQ_Dec-2011/2627 | 2011 | China | NA1 | 7 |
| JX682797 | CQ_Dec-2011/2628 | 2011 | China | NA1 | 7 |
| KC618408 | 9393 | 2007 | Italy | NA1 | Piralla, A. et al. |
| KC618409 | 9395 | 2007 | Italy | NA1 | Piralla, A. et al. |
| KC618410 | 9830 | 2009 | Italy | NA1 | Piralla, A. et al. |
| KC731482 | RSV-A/NIV1114046/11 | 2011 | India | NA1 | 15 |
| KC731483 | RSV-A/NIV1114073/11 | 2011 | India | NA1 | 15 |
| KC978856 | A/Chongqing/13-73/11.or | 2011 | China | NA1 | 16 |
| KF530261 | RSVA/Homo sapiens/DEU/106/2008 | 2008 | Germany | NA1 | Lorenzi, H. et al. |
| KF530269 | RSVA/Hep2_lab/USA/629-Q0030_RSV60/2009 | 2009 | USA | NA1 | Lorenzi, H. et al. |
| KF826817 | RSVA/Homo sapiens/MEX/43/2009 | 2009 | Mexico | NA1 | Lorenzi, H. et al. |
| KF826830 | RSVA/Homo sapiens/DEU/107/2009 | 2009 | Germany | NA1 | Lorenzi, H. et al. |
| KF826831 | RSVA/Homo sapiens/DEU/108/2009 | 2009 | Germany | NA1 | Lorenzi, H. et al. |
| KF826833 | RSVA/Homo sapiens/ITA/121/2009 | 2009 | Italy | NA1 | Lorenzi, H. et al. |
| KF826838 | RSVA/Homo sapiens/ARG/177/2006 | 2006 | Argentina | NA1 | Lorenzi, H. et al. |
| KF826840 | RSVA/Homo sapiens/MEX/29/2007 | 2007 | Mexico | NA1 | Lorenzi, H. et al. |
| KF826849 | RSVA/Hep2_lab/USA/629-Q0115_RSV89/2010 | 2010 | USA | NA1 | Lorenzi, H. et al. |
| KF826855 | RSVA/Homo sapiens/ITA/123/2009 | 2009 | Italy | NA1 | Lorenzi, H. et al. |
| KF826856 | RSVA/Homo sapiens/ITA/125/2009 | 2009 | Italy | NA1 | Lorenzi, H. et al. |
| KJ130649 | CQ_Nov-2012/3998 | 2012 | China | NA1 | 17 |
| KJ130651 | CQ_Jan-2013/4219 | 2013 | China | NA1 | 17 |
| KJ130653 | CQ_May-2013/4945 | 2013 | China | NA1 | 17 |
| KJ627250 | RSVA/Homo sapiens/PER/FLI1381/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627253 | RSVA/Homo sapiens/PER/FLE3832/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627257 | RSVA/Homo sapiens/PER/FLA5809/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627258 | RSVA/Homo sapiens/PER/FLE9486/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627259 | RSVA/Homo sapiens/PER/FPI01734/2011 | 2011 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627264 | RSVA/Homo sapiens/PER/IPE01270/2012 | 2012 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627266 | RSVA/Homo sapiens/PER/FLA6730/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627271 | RSVA/Homo sapiens/PER/FLE0433/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627272 | RSVA/Homo sapiens/PER/FLA6795/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627274 | RSVA/Homo sapiens/PER/FLA6534/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627275 | RSVA/Homo sapiens/PER/FLE9863/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627282 | RSVA/Homo sapiens/PER/FLA6623/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627286 | RSVA/Homo sapiens/PER/FLA6646/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627288 | RSVA/Homo sapiens/PER/FLA7778/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627293 | RSVA/Homo sapiens/PER/FLA7768/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627294 | RSVA/Homo sapiens/PER/FLE9761/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627296 | RSVA/Homo sapiens/PER/FLE9488/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627300 | RSVA/Homo sapiens/PER/FLA7447/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627307 | RSVA/Homo sapiens/PER/FLE9867/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627308 | RSVA/Homo sapiens/PER/FLE8972/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |

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|----------|------------------------------------|------|------|-----|------------------------|
| KJ627312 | RSVA/Homo sapiens/PER/FLE9996/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627315 | RSVA/Homo sapiens/PER/FLA7756/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627316 | RSVA/Homo sapiens/PER/FLE9593/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627318 | RSVA/Homo sapiens/PER/FLA6745/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627320 | RSVA/Homo sapiens/PER/FLE9490/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627322 | RSVA/Homo sapiens/PER/FLA6536/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627325 | RSVA/Homo sapiens/PER/FLE8626/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627328 | RSVA/Homo sapiens/PER/FLI1310/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627333 | RSVA/Homo sapiens/PER/FLE8485/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627334 | RSVA/Homo sapiens/PER/FLI2436/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-------------------------------------|-----------------|----------|----------|--------------------------|
| KJ627337 | RSVA/Homo sapiens/PER/FLA7776/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627338 | RSVA/Homo sapiens/PER/FLA7437/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627344 | RSVA/Homo sapiens/PER/FLA6900/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627349 | RSVA/Homo sapiens/PER/FLE4190/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627350 | RSVA/Homo sapiens/PER/FLA6714/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627351 | RSVA/Homo sapiens/PER/FPP00421/2011 | 2011 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627354 | RSVA/Homo sapiens/PER/FLA6683/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627355 | RSVA/Homo sapiens/PER/FLE8228/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627360 | RSVA/Homo sapiens/PER/FLA7449/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627370 | RSVA/Homo sapiens/PER/FPP00538/2011 | 2011 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627371 | RSVA/Homo sapiens/PER/FLE9518/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627372 | RSVA/Homo sapiens/PER/FLE8161/2010 | 2010 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627373 | RSVA/Homo sapiens/PER/FLA7446/2009 | 2009 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627374 | RSVA/Homo sapiens/PER/FPP00438/2011 | 2011 | Peru | NA1 | Wentworth, D.E. et al. |
| KJ627737 | RSV-A/US/BID-V8725/2013 | 2013 | USA | NA1 | Newman, R.M. et al. |
| KJ672424 | RSVA/Homo sapiens/USA/LA2_106/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672427 | RSVA/Homo sapiens/USA/LA2_09/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672428 | RSVA/Homo sapiens/USA/LA2_55/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672431 | RSVA/Homo sapiens/USA/LA2_14/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672432 | RSVA/Homo sapiens/USA/LA2_72/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672433 | RSVA/Homo sapiens/USA/LA2_95/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672436 | RSVA/Homo sapiens/USA/LA2_30/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672440 | RSVA/Homo sapiens/USA/LA2_22/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672441 | RSVA/Homo sapiens/USA/LA2_87/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672442 | RSVA/Homo sapiens/USA/LA2_45/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672443 | RSVA/Homo sapiens/USA/LA2_21/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672444 | RSVA/Homo sapiens/USA/LA2_11/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672448 | RSVA/Homo sapiens/USA/LA2_74/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672449 | RSVA/Homo sapiens/USA/LA2_28/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672454 | RSVA/Homo sapiens/USA/LA2_73/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672455 | RSVA/Homo sapiens/USA/LA2_05/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672458 | RSVA/Homo sapiens/USA/LA2_77/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672459 | RSVA/Homo sapiens/USA/LA2_60/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672464 | RSVA/Homo sapiens/USA/LA2_04/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672465 | RSVA/Homo sapiens/USA/LA2_13/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672469 | RSVA/Homo sapiens/USA/LA2_44/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672471 | RSVA/Homo sapiens/USA/LA2_85/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672472 | RSVA/Homo sapiens/USA/LA2_15/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ672475 | RSVA/Homo sapiens/USA/LA2_17/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672478 | RSVA/Homo sapiens/USA/LA2_29/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672480 | RSVA/Homo sapiens/USA/LA2_62/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KJ672482 | RSVA/Homo sapiens/USA/LA2_41/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KJ939936 | VN-120-7/09 | 2009 | Viet Nam | NA1 | 11 |
| KJ939939 | VN-168-10/09 | 2009 | Viet Nam | NA1 | 11 |
| KJ939940 | VN-217-12/09 | 2009 | Viet Nam | NA1 | 11 |
| KJ939942 | VN-356-6/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939945 | VN-372-6/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939946 | VN-378-7/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939949 | VN-525-3/10 | 2010 | Viet Nam | NA1 | 11 |

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|----------|--------------|------|----------|-----|----|
| KJ939950 | VN-587-7/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939951 | VN-733-10/09 | 2009 | Viet Nam | NA1 | 11 |
| KJ939961 | VN-794-7/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939963 | VN-808-8/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939964 | VN-816-8/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939965 | VN-820-8/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939966 | VN-824-9/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939967 | VN-832-9/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939968 | VN-833-9/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939969 | VN-834-9/10 | 2010 | Viet Nam | NA1 | 11 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-------------------------------------|-----------------|-------------|----------|--------------------------|
| KJ939970 | VN-844-11/10 | 2010 | Viet Nam | NA1 | 11 |
| KJ939971 | VN-848-12/10 | 2010 | Viet Nam | NA1 | 11 |
| KM042382 | RSVA/Homo sapiens/USA/LA2_47/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042384 | RSVA/Homo sapiens/USA/LA2_78/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042385 | RSVA/Homo sapiens/USA/LA2_39/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042386 | RSVA/Homo sapiens/USA/LA2_49/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042388 | RSVA/Homo sapiens/USA/LA2_98/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042389 | RSVA/Homo sapiens/USA/LA2_10/2012 | 2012 | USA | NA1 | Das, S. et al. |
| KM042390 | RSVA/Homo sapiens/USA/LA2_94/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042391 | RSVA/Homo sapiens/USA/LA2_83/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM042392 | RSVA/Homo sapiens/USA/LA2_56/2013 | 2013 | USA | NA1 | Das, S. et al. |
| KM517572 | A/GZ/11-224 | 2011 | China | NA1 | Xie, J.H. et al. |
| KM578843 | A/GZ/12-110 | 2012 | China | NA1 | Xie, J.H. et al. |
| KP119748 | HRSV-A-GZ08-19 | 2012 | Hong Kong | NA1 | 8 |
| KP317920 | Kilifi_11862_28_RSVA_2010 | 2011 | Kenya | NA1 | 5 |
| KP317921 | Kilifi_11862_33_RSVA_2010 | 2010 | Kenya | NA1 | 5 |
| KP317926 | Kilifi_10891_60_RSVA_2007 | 2007 | Kenya | NA1 | 5 |
| KP317935 | Kilifi_10899_41_RSVA_2010 | 2010 | Kenya | NA1 | 5 |
| KP317951 | Kilifi_11864_53_RSVA_2011 | 2011 | Kenya | NA1 | 5 |
| KP317953 | Kilifi_11862_29_RSVA_2011 | 2012 | Kenya | NA1 | 5 |
| KP317955 | Kilifi_10028_12_RSVA_2003 | 2003 | Kenya | NA1 | 5 |
| KP663728 | HRSV-A/IC688/12 | 2012 | South Korea | NA1 | 18 |
| KT285064 | B614122905 | 2014 | China | NA1 | 19 |
| KU839630 | RSVA/Homo sapiens/USA/TH-28/2014 | 2014 | USA | NA1 | Das, S.R. et al. |
| KU839637 | RSVA/Homo sapiens/USA/TH-24/2014 | 2014 | USA | NA1 | Das, S.R. et al. |
| KU950460 | RSVA/Homo sapiens/USA/TH_10473/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950464 | RSVA/Homo sapiens/USA/TH_10654/2014 | 2014 | USA | NA1 | Das, S.R. et al. |
| KU950480 | RSVA/Homo sapiens/USA/TH_10272/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950483 | RSVA/Homo sapiens/USA/TH_10534/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950485 | RSVA/Homo sapiens/USA/TH_10210/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950486 | RSVA/Homo sapiens/USA/TH_10280/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950491 | RSVA/Homo sapiens/USA/TH_10518/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950492 | RSVA/Homo sapiens/USA/TH_10166/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950505 | RSVA/Homo sapiens/USA/TH_10651/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950511 | RSVA/Homo sapiens/USA/TH_10218/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950513 | RSVA/Homo sapiens/USA/TH_10173/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950519 | RSVA/Homo sapiens/USA/TH_10629/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950521 | RSVA/Homo sapiens/USA/TH_10149/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950523 | RSVA/Homo sapiens/USA/TH_10656/2014 | 2014 | USA | NA1 | Das, S.R. et al. |
| KU950524 | RSVA/Homo sapiens/USA/TH_10094/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950529 | RSVA/Homo sapiens/USA/TH_10116/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950531 | RSVA/Homo sapiens/USA/TH_10523/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950541 | RSVA/Homo sapiens/USA/TH_10318/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950549 | RSVA/Homo sapiens/USA/TH_10630/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950550 | RSVA/Homo sapiens/USA/TH_10287/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950556 | RSVA/Homo sapiens/USA/TH_10305/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950567 | RSVA/Homo sapiens/USA/TH_10324/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950581 | RSVA/Homo sapiens/USA/TH_10159/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950585 | RSVB/Homo sapiens/USA/TH_10613/2013 | 2013 | USA | NA1 | Das, S.R. et al. |

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|----------|-------------------------------------|------|-----|-----|------------------|
| KU950590 | RSVA/Homo sapiens/USA/TH_10387/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950594 | RSVA/Homo sapiens/USA/TH_10538/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950598 | RSVA/Homo sapiens/USA/TH_10618/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950608 | RSVA/Homo sapiens/USA/TH_10508/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950610 | RSVA/Homo sapiens/USA/TH_10260/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950612 | RSVA/Homo sapiens/USA/TH_10281/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950617 | RSVA/Homo sapiens/USA/TH_10229/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950623 | RSVA/Homo sapiens/USA/TH_10606/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950624 | RSVA/Homo sapiens/USA/TH_10337/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950626 | RSVA/Homo sapiens/USA/TH_10207/2013 | 2013 | USA | NA1 | Das, S.R. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-------------------------------------|-----------------|---------|----------|--------------------------|
| KU950627 | RSVA/Homo sapiens/USA/TH_10569/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950628 | RSVA/Homo sapiens/USA/TH_10364/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950629 | RSVA/Homo sapiens/USA/TH_10500/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950631 | RSVA/Homo sapiens/USA/TH_10093/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950638 | RSVA/Homo sapiens/USA/TH_10552/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950642 | RSVA/Homo sapiens/USA/TH_10128/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950643 | RSVA/Homo sapiens/USA/TH_10268/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950649 | RSVA/Homo sapiens/USA/TH_11186/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950652 | RSVA/Homo sapiens/USA/TH_10144/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950655 | RSVA/Homo sapiens/USA/TH_10293/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950661 | RSVA/Homo sapiens/USA/TH_10183/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950666 | RSVA/Homo sapiens/USA/TH_10657/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950667 | RSVA/Homo sapiens/USA/TH_10104/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950670 | RSVA/Homo sapiens/USA/TH_10220/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950673 | RSVA/Homo sapiens/USA/TH_10236/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950677 | RSVA/Homo sapiens/USA/TH_10148/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950685 | RSVA/Homo sapiens/USA/TH_10509/2013 | 2013 | USA | NA1 | Das, S.R. et al. |
| KU950686 | RSVA/Homo sapiens/USA/TH_10506/2014 | 2014 | USA | NA1 | Das, S.R. et al. |
| KU950694 | RSVA/Homo sapiens/USA/TH_10233/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KU950696 | RSVA/Homo sapiens/USA/TH_10283/2012 | 2012 | USA | NA1 | Das, S.R. et al. |
| KX510137 | Kilifi_10590_33_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510141 | Kilifi_10028_7_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510142 | Kilifi_10010_53_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510157 | Kilifi_10028_6_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510159 | Kilifi_10025_30_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510189 | Kilifi_9466_21_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510223 | Kilifi_10028_15_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510229 | Kilifi_10025_25_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510237 | Kilifi_9696_36_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510243 | Kilifi_11862_27_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510247 | Kilifi_10028_8_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510253 | Kilifi_10014_42_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX510261 | Kilifi_10014_40_RSVA_2010 | 2010 | Kenya | NA1 | Agoti, C.N. et al. |
| KX655616 | RSVA/Homo sapiens/JOR/A0444/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655623 | RSVA/Homo sapiens/JOR/B1148/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655626 | RSVA/Homo sapiens/JOR/D3721/2013 | 2013 | Jordan | NA1 | Shabman, R. et al. |
| KX655630 | RSVA/Homo sapiens/JOR/B1429/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655631 | RSVA/Homo sapiens/JOR/C2186/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655632 | RSVA/Homo sapiens/JOR/B1543/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655636 | RSVA/Homo sapiens/JOR/B1191/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655637 | RSVA/Homo sapiens/JOR/C2109/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655638 | RSVA/Homo sapiens/JOR/A0398/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655639 | RSVA/Homo sapiens/JOR/A0125/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655640 | RSVA/Homo sapiens/JOR/D3681/2013 | 2013 | Jordan | NA1 | Shabman, R. et al. |
| KX655643 | RSVA/Homo sapiens/JOR/D3156/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655644 | RSVA/Homo sapiens/JOR/A0614/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655647 | RSVA/Homo sapiens/JOR/A0400/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655650 | RSVA/Homo sapiens/JOR/C2147/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655656 | RSVA/Homo sapiens/JOR/D3007/2010 | 2010 | Jordan | NA1 | Shabman, R. et al. |

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|----------|----------------------------------|------|--------|-----|--------------------|
| KX655657 | RSVA/Homo sapiens/JOR/D3040/2010 | 2010 | Jordan | NA1 | Shabman, R. et al. |
| KX655658 | RSVA/Homo sapiens/JOR/C2659/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655662 | RSVA/Homo sapiens/JOR/D3317/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655663 | RSVA/Homo sapiens/JOR/D3416/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655665 | RSVA/Homo sapiens/JOR/C2769/2013 | 2013 | Jordan | NA1 | Shabman, R. et al. |
| KX655666 | RSVA/Homo sapiens/JOR/D3141/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655670 | RSVA/Homo sapiens/JOR/B1464/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655672 | RSVA/Homo sapiens/JOR/C2356/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655675 | RSVA/Homo sapiens/JOR/D3431/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655676 | RSVA/Homo sapiens/JOR/B1432/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|--------------------------------------|-----------------|-------------|----------|--------------------------|
| KX655677 | RSVA/Homo sapiens/JOR/B1391/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655678 | RSVA/Homo sapiens/JOR/A0108/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655679 | RSVA/Homo sapiens/JOR/B1035/2010 | 2010 | Jordan | NA1 | Shabman, R. et al. |
| KX655682 | RSVA/Homo sapiens/JOR/B1515/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655689 | RSVA/Homo sapiens/JOR/B1454/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655691 | RSVA/Homo sapiens/JOR/D3371/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655692 | RSVA/Homo sapiens/JOR/C2196/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655694 | RSVA/Homo sapiens/JOR/A0215/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655696 | RSVA/Homo sapiens/JOR/C2121/2011 | 2011 | Jordan | NA1 | Shabman, R. et al. |
| KX655697 | RSVA/Homo sapiens/JOR/A0417/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX655699 | RSVA/Homo sapiens/JOR/D3332/2012 | 2012 | Jordan | NA1 | Shabman, R. et al. |
| KX765894 | RSVA/Homo sapiens/NZL/LJRSV84/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765896 | RSVA/Homo sapiens/NZL/LJRSV81/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765898 | RSVA/Homo sapiens/NZL/LJRSV12/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765902 | RSVA/Homo sapiens/NZL/LJRSV33/2014 | 2014 | New Zealand | NA1 | Shabman, R. et al. |
| KX765910 | RSVA/Homo sapiens/NZL/LJRSV69/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765911 | RSVA/Homo sapiens/NZL/LJRSV75/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765916 | RSVA/Homo sapiens/NZL/LJRSV02/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765917 | RSVA/Homo sapiens/NZL/LJRSV28/2014 | 2014 | New Zealand | NA1 | Shabman, R. et al. |
| KX765918 | RSVA/Homo sapiens/NZL/LJRSV77/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765919 | RSVA/Homo sapiens/NZL/LJRSV37/2013 | 2013 | New Zealand | NA1 | Shabman, R. et al. |
| KX765924 | RSVA/Homo sapiens/NZL/LJRSV99/2010 | 2010 | New Zealand | NA1 | Shabman, R. et al. |
| KX765925 | RSVA/Homo sapiens/NZL/LJRSV13/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765926 | RSVA/Homo sapiens/NZL/LJRSV59/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765928 | RSVA/Homo sapiens/NZL/LJRSV83/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765931 | RSVA/Homo sapiens/NZL/LJRSV70/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765932 | RSVA/Homo sapiens/NZL/LJRSV06/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765934 | RSVA/Homo sapiens/NZL/LJRSV65/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765938 | RSVA/Homo sapiens/NZL/LJRSV74/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765941 | RSVA/Homo sapiens/NZL/LJRSV04/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765942 | RSVA/Homo sapiens/NZL/LJRSV80/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765944 | RSVA/Homo sapiens/NZL/LJRSV08/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765946 | RSVA/Homo sapiens/NZL/LJRSV57/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765955 | RSVA/Homo sapiens/NZL/LJRSV09/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765956 | RSVA/Homo sapiens/NZL/LJRSV14/2015 | 2015 | New Zealand | NA1 | Shabman, R. et al. |
| KX765958 | RSVA/Homo sapiens/NZL/LJRSV68/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765960 | RSVA/Homo sapiens/NZL/LJRSV76/2011 | 2011 | New Zealand | NA1 | Shabman, R. et al. |
| KX765967 | RSVA/Homo sapiens/NZL/LJRSV64/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765969 | RSVA/Homo sapiens/NZL/LJRSV61/2012 | 2012 | New Zealand | NA1 | Shabman, R. et al. |
| KX765970 | RSVA/Homo sapiens/NZL/LJRSV31/2014 | 2014 | New Zealand | NA1 | Shabman, R. et al. |
| KX765977 | RSVA/Homo sapiens/NZL/LJRSV18/2014 | 2014 | New Zealand | NA1 | Shabman, R. et al. |
| KX858757 | 13-005275 | 2013 | Netherlands | NA1 | Coenjaerts, F.E.J. |
| KX894805 | RSVA/Homo sapiens/USA/TH_10293P/2013 | 2013 | USA | NA1 | Shabman, R. et al. |
| KX894807 | RSVA/Homo sapiens/USA/TH_10280P/2013 | 2013 | USA | NA1 | Shabman, R. et al. |
| KY296707 | CC12-10 | 2012 | China | NA1 | 9 |
| KY296714 | BJ_08-14 | 2005 | China | NA1 | 9 |
| KY296717 | BJ_09-58 | 2005 | China | NA1 | 9 |
| KY296719 | BJ_10-28 | 2005 | China | NA1 | 9 |
| KY296720 | BJ_11-01 | 2011 | China | NA1 | 9 |

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|----------|---------|------|-------|-----|---|
| KY296721 | CC09-01 | 2009 | China | NA1 | 9 |
| KY296722 | CC12-09 | 2012 | China | NA1 | 9 |
| KY296723 | CC12-11 | 2012 | China | NA1 | 9 |
| KY296724 | CC12-14 | 2012 | China | NA1 | 9 |
| KY296725 | CC12-16 | 2012 | China | NA1 | 9 |
| KY296726 | CC13-01 | 2013 | China | NA1 | 9 |
| KY296727 | CC13-12 | 2013 | China | NA1 | 9 |
| KY296729 | CC13-21 | 2013 | China | NA1 | 9 |
| KY296730 | CC14-10 | 2014 | China | NA1 | 9 |
| KY296732 | CC14-52 | 2014 | China | NA1 | 9 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|----------|-----------------|---------|----------|--------------------------|
| KY296733 | CC14-76 | 2014 | China | NA1 | 9 |
| KY296734 | GZ10-01 | 2005 | China | NA1 | 9 |
| KY296735 | GZ10-06 | 2005 | China | NA1 | 9 |
| KY296736 | GZ11-01 | 2011 | China | NA1 | 9 |
| KY296737 | GZ11-04 | 2011 | China | NA1 | 9 |
| KY296740 | GZ11-11 | 2005 | China | NA1 | 9 |
| KY296741 | GZ11-12 | 2005 | China | NA1 | 9 |
| KY296742 | GZ11-13 | 2005 | China | NA1 | 9 |
| KY296743 | GZ11-14 | 2005 | China | NA1 | 9 |
| KY296744 | GZ11-15 | 2005 | China | NA1 | 9 |
| KY296745 | GZ11-16 | 2005 | China | NA1 | 9 |
| KY296746 | GZ11-17 | 2005 | China | NA1 | 9 |
| KY296749 | GZ11-02 | 2011 | China | NA1 | 9 |
| KY296750 | GZ11-20 | 2005 | China | NA1 | 9 |
| KY296752 | GZ11-22 | 2005 | China | NA1 | 9 |
| KY296753 | GZ11-24 | 2005 | China | NA1 | 9 |
| KY296754 | GZ11-25 | 2005 | China | NA1 | 9 |
| KY296755 | GZ11-26 | 2005 | China | NA1 | 9 |
| KY296756 | GZ11-27 | 2005 | China | NA1 | 9 |
| KY296758 | GZ11-05 | 2011 | China | NA1 | 9 |
| KY296759 | GZ11-06 | 2011 | China | NA1 | 9 |
| KY296760 | GZ11-07 | 2011 | China | NA1 | 9 |
| KY296761 | GZ11-08 | 2011 | China | NA1 | 9 |
| KY296762 | GZ12-01 | 2012 | China | NA1 | 9 |
| KY296763 | HeB13-02 | 2013 | China | NA1 | 9 |
| KY296764 | HeB14-01 | 2014 | China | NA1 | 9 |
| KY296765 | HuN12-04 | 2012 | China | NA1 | 9 |
| KY296766 | HuN12-20 | 2012 | China | NA1 | 9 |
| KY296768 | HuN14-02 | 2005 | China | NA1 | 9 |
| KY296770 | HuN14-04 | 2005 | China | NA1 | 9 |
| KY296771 | SaX10-45 | 2010 | China | NA1 | 9 |
| KY296772 | SaX10-46 | 2010 | China | NA1 | 9 |
| KY296774 | SaX10-64 | 2010 | China | NA1 | 9 |
| KY296775 | SaX10-68 | 2010 | China | NA1 | 9 |
| KY296776 | SaX11-01 | 2011 | China | NA1 | 9 |
| KY296777 | SaX11-15 | 2011 | China | NA1 | 9 |
| KY296778 | SaX11-16 | 2011 | China | NA1 | 9 |
| KY296779 | SaX13-43 | 2013 | China | NA1 | 9 |
| KY296781 | GS10-03 | 2010 | China | NA1 | 9 |
| KY296782 | GS10-04 | 2010 | China | NA1 | 9 |
| KY296786 | GS11-08 | 2011 | China | NA1 | 9 |
| KY296787 | GS11-11 | 2011 | China | NA1 | 9 |
| KY296788 | GS11-13 | 2011 | China | NA1 | 9 |
| KY296790 | GS11-20 | 2011 | China | NA1 | 9 |
| KY296793 | HuN11-01 | 2014 | China | NA1 | 9 |
| KY296794 | SH10-10 | 2010 | China | NA1 | 9 |
| KY296795 | SH10-15 | 2010 | China | NA1 | 9 |
| KY296796 | SH10-16 | 2010 | China | NA1 | 9 |
| KY296797 | SH10-17 | 2010 | China | NA1 | 9 |

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|----------|---------------|------|-------------|-----|----------------|
| KY460517 | TW-00026-2010 | 2010 | Taiwan | NA1 | 20 |
| KY654506 | TTa-12-054 | 2012 | Philippines | NA1 | 21 |
| KY654508 | TEv-12-111 | 2012 | Philippines | NA1 | 21 |
| KY654509 | TEv-12-137 | 2012 | Philippines | NA1 | 21 |
| KY654510 | TOp-12-061 | 2012 | Philippines | NA1 | 21 |
| KY654511 | TBp-13-167 | 2013 | Philippines | NA1 | 21 |
| KY654514 | TEv-13-132 | 2013 | Philippines | NA1 | 21 |
| KY654516 | TOp-13-186 | 2013 | Philippines | NA1 | 21 |
| KY654517 | TOp-13-203 | 2013 | Philippines | NA1 | 21 |
| KY782635 | LZ01/09 | 2009 | China | NA1 | Zhu, C. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-----------------------------------|-----------------|-----------|----------|--------------------------|
| KY883566 | HRSV/A/BuenosAires/ARG/001/2015 | 2015 | Argentina | NA1 | Goya, S. et al. |
| KY883572 | HRSV/A/BuenosAires/ARG/003/2015 | 2015 | Argentina | NA1 | Goya, S. et al. |
| KY967362 | SC2892 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| KY967363 | SC2745 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| KY982517 | RSVA/Homo sapiens/USA/LA2_03/2013 | 2013 | USA | NA1 | Shrivastava, S. et al. |
| LC337896 | HRSV/Yokohama.JPN/P2733/2004 | 2004 | Japan | NA1 | Saikusa, M. et al. |
| LC337898 | HRSV/Yokohama.JPN/P2747/2004 | 2004 | Japan | NA1 | Saikusa, M. et al. |
| LC337908 | HRSV/Yokohama.JPN/P2820/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC337910 | HRSV/Yokohama.JPN/P3180/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC337911 | HRSV/Yokohama.JPN/P3189/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC337912 | HRSV/Yokohama.JPN/P3194/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC337913 | HRSV/Yokohama.JPN/P3196/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC337915 | HRSV/Yokohama.JPN/P3227/2005 | 2005 | Japan | NA1 | Saikusa, M. et al. |
| LC365793 | HRSV/Yokohama.JPN/P4258/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365794 | HRSV/Yokohama.JPN/P4352/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365796 | HRSV/Yokohama.JPN/P4396/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365800 | HRSV/Yokohama.JPN/P4425/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365802 | HRSV/Yokohama.JPN/P4431/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365804 | HRSV/Yokohama.JPN/P4434/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365806 | HRSV/Yokohama.JPN/P4438/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365807 | HRSV/Yokohama.JPN/P4440/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365808 | HRSV/Yokohama.JPN/P4443/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365809 | HRSV/Yokohama.JPN/P4449/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365810 | HRSV/Yokohama.JPN/P4450/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365811 | HRSV/Yokohama.JPN/P4456/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365812 | HRSV/Yokohama.JPN/P4459/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365813 | HRSV/Yokohama.JPN/P4470/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365814 | HRSV/Yokohama.JPN/P4486/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365817 | HRSV/Yokohama.JPN/P4497/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365818 | HRSV/Yokohama.JPN/P4499/2008 | 2008 | Japan | NA1 | Saikusa, M. et al. |
| LC365819 | HRSV/Yokohama.JPN/P5050/2009 | 2009 | Japan | NA1 | Saikusa, M. et al. |
| LC365821 | HRSV/Yokohama.JPN/P5077/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365822 | HRSV/Yokohama.JPN/P5082/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365823 | HRSV/Yokohama.JPN/P5114/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365824 | HRSV/Yokohama.JPN/P5123/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365825 | HRSV/Yokohama.JPN/P5127/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365828 | HRSV/Yokohama.JPN/P5142/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365830 | HRSV/Yokohama.JPN/P5166/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365831 | HRSV/Yokohama.JPN/P5167/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365832 | HRSV/Yokohama.JPN/P5172/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365833 | HRSV/Yokohama.JPN/P5173/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365834 | HRSV/Yokohama.JPN/P5184/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365835 | HRSV/Yokohama.JPN/P5187/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365836 | HRSV/Yokohama.JPN/P5188/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365837 | HRSV/Yokohama.JPN/P5193/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365838 | HRSV/Yokohama.JPN/P5201/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365839 | HRSV/Yokohama.JPN/P5202/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365840 | HRSV/Yokohama.JPN/P5403/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365842 | HRSV/Yokohama.JPN/P5484/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |

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|----------|------------------------------|------|-------|-----|--------------------|
| LC365843 | HRSV/Yokohama.JPN/P5485/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365844 | HRSV/Yokohama.JPN/P5486/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365848 | HRSV/Yokohama.JPN/P5513/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365849 | HRSV/Yokohama.JPN/P5517/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365850 | HRSV/Yokohama.JPN/P5531/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365851 | HRSV/Yokohama.JPN/P5567/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365852 | HRSV/Yokohama.JPN/P5583/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365853 | HRSV/Yokohama.JPN/P5587/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365854 | HRSV/Yokohama.JPN/P5591/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365855 | HRSV/Yokohama.JPN/P5594/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|------------------------------|-----------------|---------|----------|--------------------------|
| LC365856 | HRSV/Yokohama.JPN/P5596/2010 | 2010 | Japan | NA1 | Saikusa, M. et al. |
| LC365857 | HRSV/Yokohama.JPN/P5623/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365858 | HRSV/Yokohama.JPN/P5649/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365859 | HRSV/Yokohama.JPN/P5718/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365862 | HRSV/Yokohama.JPN/HN170/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365863 | HRSV/Yokohama.JPN/P5845/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365864 | HRSV/Yokohama.JPN/P5920/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365865 | HRSV/Yokohama.JPN/P5947/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365866 | HRSV/Yokohama.JPN/P5952/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365867 | HRSV/Yokohama.JPN/P5957/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365868 | HRSV/Yokohama.JPN/P6097/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365869 | HRSV/Yokohama.JPN/P6098/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365870 | HRSV/Yokohama.JPN/P6106/2011 | 2011 | Japan | NA1 | Saikusa, M. et al. |
| LC365871 | HRSV/Yokohama.JPN/P6247/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365874 | HRSV/Yokohama.JPN/P6442/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365875 | HRSV/Yokohama.JPN/P6467/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365877 | HRSV/Yokohama.JPN/P6510/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365878 | HRSV/Yokohama.JPN/P6511/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365879 | HRSV/Yokohama.JPN/P6512/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365880 | HRSV/Yokohama.JPN/P6515/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365881 | HRSV/Yokohama.JPN/P6529/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365882 | HRSV/Yokohama.JPN/P6533/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365883 | HRSV/Yokohama.JPN/P6535/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365884 | HRSV/Yokohama.JPN/P6538/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365885 | HRSV/Yokohama.JPN/P6539/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365886 | HRSV/Yokohama.JPN/P6540/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365888 | HRSV/Yokohama.JPN/P6547/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365889 | HRSV/Yokohama.JPN/P6548/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365893 | HRSV/Yokohama.JPN/P6577/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365894 | HRSV/Yokohama.JPN/P6579/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365895 | HRSV/Yokohama.JPN/P6580/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365896 | HRSV/Yokohama.JPN/P6581/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365897 | HRSV/Yokohama.JPN/P6582/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365898 | HRSV/Yokohama.JPN/P6587/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365899 | HRSV/Yokohama.JPN/P6605/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365900 | HRSV/Yokohama.JPN/P6606/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365901 | HRSV/Yokohama.JPN/P6621/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365902 | HRSV/Yokohama.JPN/P6631/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365903 | HRSV/Yokohama.JPN/P6658/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365904 | HRSV/Yokohama.JPN/P6669/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365905 | HRSV/Yokohama.JPN/P6680/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365906 | HRSV/Yokohama.JPN/P6681/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365907 | HRSV/Yokohama.JPN/P6696/2012 | 2012 | Japan | NA1 | Saikusa, M. et al. |
| LC365908 | HRSV/Yokohama.JPN/P6694/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365909 | HRSV/Yokohama.JPN/P6768/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365910 | HRSV/Yokohama.JPN/P6775/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365911 | HRSV/Yokohama.JPN/P6798/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365912 | HRSV/Yokohama.JPN/P6812/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365914 | HRSV/Yokohama.JPN/P6822/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |

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| LC365915 | HRSV/Yokohama.JPN/P6892/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC365916 | HRSV/Yokohama.JPN/P6949/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367132 | HRSV/Yokohama.JPN/P7052/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367133 | HRSV/Yokohama.JPN/P7087/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367135 | HRSV/Yokohama.JPN/P7111/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367136 | HRSV/Yokohama.JPN/P7112/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367137 | HRSV/Yokohama.JPN/P7134/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367138 | HRSV/Yokohama.JPN/P7136/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367139 | HRSV/Yokohama.JPN/P7137/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367140 | HRSV/Yokohama.JPN/P7142/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|------------------------------|-----------------|---------|----------|--------------------------|
| LC367141 | HRSV/Yokohama.JPN/P7154/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367142 | HRSV/Yokohama.JPN/P7158/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367144 | HRSV/Yokohama.JPN/P7190/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367145 | HRSV/Yokohama.JPN/P7194/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367146 | HRSV/Yokohama.JPN/P7204/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367147 | HRSV/Yokohama.JPN/P7216/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367148 | HRSV/Yokohama.JPN/P7218/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367149 | HRSV/Yokohama.JPN/P7226/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367150 | HRSV/Yokohama.JPN/P7232/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367151 | HRSV/Yokohama.JPN/P7233/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367152 | HRSV/Yokohama.JPN/P7239/2013 | 2013 | Japan | NA1 | Saikusa, M. et al. |
| LC367153 | HRSV/Yokohama.JPN/P7469/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367161 | HRSV/Yokohama.JPN/P7620/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367162 | HRSV/Yokohama.JPN/P7623/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367163 | HRSV/Yokohama.JPN/P7624/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367164 | HRSV/Yokohama.JPN/P7629/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367166 | HRSV/Yokohama.JPN/P7683/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367168 | HRSV/Yokohama.JPN/P7694/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367172 | HRSV/Yokohama.JPN/P7714/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367173 | HRSV/Yokohama.JPN/P7718/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367174 | HRSV/Yokohama.JPN/P7744/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367175 | HRSV/Yokohama.JPN/P7745/2014 | 2014 | Japan | NA1 | Saikusa, M. et al. |
| LC367176 | HRSV/Yokohama.JPN/P7764/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367177 | HRSV/Yokohama.JPN/P7785/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367178 | HRSV/Yokohama.JPN/P7795/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367179 | HRSV/Yokohama.JPN/P7904/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367182 | HRSV/Yokohama.JPN/P8106/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367183 | HRSV/Yokohama.JPN/P8109/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367184 | HRSV/Yokohama.JPN/P8112/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367186 | HRSV/Yokohama.JPN/P8139/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367188 | HRSV/Yokohama.JPN/P8153/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367189 | HRSV/Yokohama.JPN/P8158/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367190 | HRSV/Yokohama.JPN/P8176/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367191 | HRSV/Yokohama.JPN/P8188/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367192 | HRSV/Yokohama.JPN/P8197/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367193 | HRSV/Yokohama.JPN/P8204/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367194 | HRSV/Yokohama.JPN/P8217/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367195 | HRSV/Yokohama.JPN/P8219/2015 | 2015 | Japan | NA1 | Saikusa, M. et al. |
| LC367196 | HRSV/Yokohama.JPN/P8237/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367197 | HRSV/Yokohama.JPN/P8238/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367198 | HRSV/Yokohama.JPN/P8242/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367199 | HRSV/Yokohama.JPN/I927/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367200 | HRSV/Yokohama.JPN/P8361/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367202 | HRSV/Yokohama.JPN/P8392/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367203 | HRSV/Yokohama.JPN/P8565/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367206 | HRSV/Yokohama.JPN/P8575/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367207 | HRSV/Yokohama.JPN/P8585/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367208 | HRSV/Yokohama.JPN/P8594/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367210 | HRSV/Yokohama.JPN/P8601/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |

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| LC367211 | HRSV/Yokohama.JPN/P8609/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367212 | HRSV/Yokohama.JPN/P8670/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367213 | HRSV/Yokohama.JPN/P8673/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367214 | HRSV/Yokohama.JPN/P8697/2016 | 2016 | Japan | NA1 | Saikusa, M. et al. |
| LC367217 | HRSV/Yokohama.JPN/P8898/2017 | 2017 | Japan | NA1 | Saikusa, M. et al. |
| LC367218 | HRSV/Yokohama.JPN/P8936/2017 | 2017 | Japan | NA1 | Saikusa, M. et al. |
| LC367219 | HRSV/Yokohama.JPN/P8980/2017 | 2017 | Japan | NA1 | Saikusa, M. et al. |
| LC377910 | TB5_CA-14-0345 | 2014 | Philippines | NA1 | 22 |
| LC377911 | TB1_KW-14-0022 | 2014 | Philippines | NA1 | 22 |
| LC474556 | RSV/A/NIID/2347/14 | 2014 | USA | NA1 | Shirato, K. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|--------------------|-----------------|---------|----------|--------------------------|
| LC474557 | RSV/A/NIID/2367/14 | 2014 | USA | NA1 | Shirato, K. et al. |
| LC474558 | RSV/A/NIID/2370/14 | 2014 | USA | NA1 | Shirato, K. et al. |
| LC530050 | sugckmmaht NGO3 | 2019 | Japan | NA1 | Takeuchi, S. et al. |
| MF001041 | 6A5 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001043 | 6A7 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001047 | 6O1 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001050 | 8P3 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001051 | 8P4 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001052 | 8P9 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001053 | 8Q1 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001054 | 8Q3 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF001057 | 8S5 | 2015 | USA | NA1 | Greninger, A.L. et al. |
| MF361899 | MAD/GM2_2/12 | 2012 | Spain | NA1 | 2 |
| MF361901 | MAD/GM2_13/12 | 2012 | Spain | NA1 | 2 |
| MF361902 | MAD/GM2_14/12 | 2012 | Spain | NA1 | 2 |
| MF445909 | FJ121101-16 | 2012 | China | NA1 | Su, Y. et al. |
| MF445910 | FJ111121-12 | 2011 | China | NA1 | Su, Y. et al. |
| MF445912 | FJ130211-06 | 2013 | China | NA1 | Su, Y. et al. |
| MF445913 | FJ131204-24 | 2013 | China | NA1 | Su, Y. et al. |
| MF445915 | FJ141121-24 | 2014 | China | NA1 | Su, Y. et al. |
| MF445917 | FJ150219-36 | 2015 | China | NA1 | Su, Y. et al. |
| MF445918 | FJ150223-25 | 2015 | China | NA1 | Su, Y. et al. |
| MF445919 | FJ111207-05 | 2011 | China | NA1 | Su, Y. et al. |
| MF445920 | FJ121125-58 | 2012 | China | NA1 | Su, Y. et al. |
| MF445922 | FJ130314-07 | 2013 | China | NA1 | Su, Y. et al. |
| MF445923 | FJ130314-08 | 2013 | China | NA1 | Su, Y. et al. |
| MF445924 | FJ131007-09 | 2013 | China | NA1 | Su, Y. et al. |
| MF445925 | FJ131127-14 | 2013 | China | NA1 | Su, Y. et al. |
| MF445926 | FJ120326-15 | 2012 | China | NA1 | Su, Y. et al. |
| MF445928 | FJ141202-29 | 2014 | China | NA1 | Su, Y. et al. |
| MF445929 | FJ150112-24 | 2015 | China | NA1 | Su, Y. et al. |
| MF445930 | FJ150117-62 | 2015 | China | NA1 | Su, Y. et al. |
| MF445931 | FJ150204-34 | 2015 | China | NA1 | Su, Y. et al. |
| MF445932 | FJ150319-13 | 2015 | China | NA1 | Su, Y. et al. |
| MF445933 | FJ131212-17 | 2013 | China | NA1 | Su, Y. et al. |
| MF445934 | FJ120113-07 | 2012 | China | NA1 | Su, Y. et al. |
| MF445935 | FJ131128-19 | 2013 | China | NA1 | Su, Y. et al. |
| MF445936 | FJ131222-27 | 2013 | China | NA1 | Su, Y. et al. |
| MF445937 | FJ140104-09 | 2014 | China | NA1 | Su, Y. et al. |
| MF445938 | FJ140112-12 | 2014 | China | NA1 | Su, Y. et al. |
| MF445939 | FJ141121-25 | 2014 | China | NA1 | Su, Y. et al. |
| MF445940 | FJ141209-31 | 2014 | China | NA1 | Su, Y. et al. |
| MF445951 | FJ120121-36 | 2012 | China | NA1 | Su, Y. et al. |
| MF445952 | FJ111227-14 | 2011 | China | NA1 | Su, Y. et al. |
| MF445953 | FJ120108-05 | 2012 | China | NA1 | Su, Y. et al. |
| MF445954 | FJ120121-14 | 2012 | China | NA1 | Su, Y. et al. |
| MF445955 | FJ120129-13 | 2012 | China | NA1 | Su, Y. et al. |
| MF445956 | FJ120202-24 | 2012 | China | NA1 | Su, Y. et al. |
| MF445957 | FJ101227-13 | 2010 | China | NA1 | Su, Y. et al. |

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|----------|--------------------|------|-------|-----|----------------|
| MF445958 | FJ110101-11 | 2011 | China | NA1 | Su, Y. et al. |
| MF445959 | FJ110328-24A | 2011 | China | NA1 | Su, Y. et al. |
| MF445960 | FJ110101-46 | 2011 | China | NA1 | Su, Y. et al. |
| MF445961 | FJ110111-23 | 2011 | China | NA1 | Su, Y. et al. |
| MF445962 | FJ110305-45 | 2011 | China | NA1 | Su, Y. et al. |
| MF445963 | FJ111026-32 | 2011 | China | NA1 | Su, Y. et al. |
| MF445964 | FJ111114-24 | 2011 | China | NA1 | Su, Y. et al. |
| MF614946 | BJ/40180 | 2012 | China | NA1 | Cui, G. et al. |
| MF614947 | BJ/45117 | 2013 | China | NA1 | Cui, G. et al. |
| MF978510 | RSVA-CAP-1/BJ/2014 | 2014 | China | NA1 | 12 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|-----------------------|-----------------|---------|----------|--------------------------|
| MF978511 | RSVA-CAP-8/BJ/2014 | 2015 | China | NA1 | 12 |
| MF978513 | RSVA-CAP-10/BJ/2014 | 2014 | China | NA1 | 12 |
| MF978514 | RSVA-CAP-11/BJ/2014 | 2014 | China | NA1 | 12 |
| MF978515 | RSVA-CAP-14/BJ/2014 | 2014 | China | NA1 | 12 |
| MF978516 | RSVA-CAP-22/BJ/2014 | 2014 | China | NA1 | 12 |
| MF978517 | RSVA-CAP-30/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978518 | RSVA-CAP-31/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978519 | RSVA-CAP-33/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978520 | RSVA-CAP-42/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978521 | RSVA-CAP-43/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978522 | RSVA-CAP-54/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978523 | RSVA-CAP-56/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978524 | RSVA-CAP-61/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978525 | RSVA-CAP-66/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978526 | RSVA-CAP-67/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978527 | RSVA-CAP-92/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978528 | RSVA-CAP-132/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978529 | RSVA-CAP-234/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978530 | RSVA-CAP-250/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978531 | RSVA-CAP-255/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978532 | RSVA-CAP-328/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978533 | RSVA-CAP-356/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978534 | RSVA-CAP-398/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978535 | RSVA-CAP-402/BJ/2015 | 2015 | China | NA1 | 12 |
| MF978536 | RSVA-CAP-405/BJ/2016 | 2016 | China | NA1 | 12 |
| MF978537 | RSVB-CQ-115/CQ/2015 | 2015 | China | NA1 | 12 |
| MF978538 | RSVB-CQ-235/CQ/2015 | 2015 | China | NA1 | 12 |
| MF978539 | RSVA-GYYF-1/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978540 | RSVA-GYYF-3/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978541 | RSVA-GYYF-36/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978542 | RSVA-GYYF-55/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978543 | RSVA-GYYF-57/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978544 | RSVA-GYYF-91/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978545 | RSVA-GYYF-106/GZ/2016 | 2016 | China | NA1 | 12 |
| MF978546 | RSVA-GYYF-148/GZ/2016 | 2016 | China | NA1 | 12 |
| MF978547 | RSVA-GZFE-9/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978548 | RSVA-GZFE-22/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978549 | RSVA-GZFE-32/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978550 | RSVA-GZFE-34/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978551 | RSVA-GZFE-114/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978552 | RSVA-GZFE-128/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978553 | RSVA-GZFE-150/GZ/2015 | 2015 | China | NA1 | 12 |
| MF978554 | RSVA-HB-80/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978555 | RSVA-HB-84/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978556 | RSVA-HB-88/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978557 | RSVA-HB-89/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978558 | RSVA-HB-97/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978559 | RSVA-HB-99/HeB/2014 | 2014 | China | NA1 | 12 |
| MF978561 | RSVA-HB-102/HeB/2014 | 2014 | China | NA1 | 12 |

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|----------|----------------------|------|-------|-----|----|
| MF978562 | RSVA-HB-197/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978563 | RSVA-HB-216/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978565 | RSVA-HB-251/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978566 | RSVA-HB-263/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978569 | RSVA-HB-274/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978570 | RSVA-HB-276/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978571 | RSVA-HB-277/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978572 | RSVA-HB-279/HeB/2015 | 2015 | China | NA1 | 12 |
| MF978573 | RSVA-HB-294/HeB/2016 | 2016 | China | NA1 | 12 |
| MF978574 | RSVA-HB-297/HeB/2016 | 2016 | China | NA1 | 12 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|----------------------|-----------------|---------|----------|--------------------------|
| MF978575 | RSVA-HB-307/HeB/2016 | 2016 | China | NA1 | 12 |
| MF978576 | RSVA-HB-312/HeB/2016 | 2016 | China | NA1 | 12 |
| MF978578 | RSVA-WZ-6/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978579 | RSVA-WZ-10/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978581 | RSVA-WZ-16/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978582 | RSVA-WZ-17/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978583 | RSVA-WZ-19/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978584 | RSVA-WZ-20/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978585 | RSVA-WZ-23/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978586 | RSVA-WZ-26/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978587 | RSVA-WZ-28/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978589 | RSVA-WZ-33/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978591 | RSVA-WZ-38/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978592 | RSVA-WZ-40/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978595 | RSVA-WZ-44/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978596 | RSVA-WZ-47/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978598 | RSVA-WZ-52/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978599 | RSVA-WZ-53/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978600 | RSVA-WZ-57/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978601 | RSVA-WZ-60/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978603 | RSVA-WZ-64/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978605 | RSVA-WZ-68/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978606 | RSVA-WZ-72/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978607 | RSVA-WZ-73/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978608 | RSVA-WZ-76/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978609 | RSVA-WZ-79/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978610 | RSVA-WZ-82/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978611 | RSVA-WZ-84/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978612 | RSVA-WZ-85/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978613 | RSVA-WZ-92/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978614 | RSVA-WZ-94/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978615 | RSVA-WZ-101/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978617 | RSVA-WZ-109/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978618 | RSVA-WZ-113/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978619 | RSVA-WZ-114/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978620 | RSVA-WZ-117/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978621 | RSVA-WZ-122/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978622 | RSVA-WZ-123/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978623 | RSVA-WZ-127/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978624 | RSVA-WZ-128/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978626 | RSVA-WZ-133/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978627 | RSVA-WZ-135/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978628 | RSVA-WZ-154/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978629 | RSVA-WZ-160/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978630 | RSVA-WZ-168/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978631 | RSVA-WZ-169/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978633 | RSVA-WZ-182/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978634 | RSVB-WZ-183/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978638 | RSVA-WZ-192/ZJ/2015 | 2015 | China | NA1 | 12 |

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|----------|---------------------|------|-------|-----|----|
| MF978639 | RSVA-WZ-193/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978640 | RSVA-WZ-195/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978642 | RSVA-WZ-207/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978643 | RSVA-WZ-208/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978644 | RSVA-WZ-213/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978645 | RSVA-WZ-215/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978646 | RSVA-WZ-217/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978647 | RSVA-WZ-220/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978648 | RSVA-WZ-221/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978649 | RSVA-WZ-232/ZJ/2015 | 2015 | China | NA1 | 12 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---------------------------------|-----------------|-----------|----------|--------------------------|
| MF978651 | RSVA-WZ-285/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978652 | RSVA-WZ-287/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978653 | RSVA-WZ-288/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978654 | RSVA-WZ-336/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978655 | RSVA-WZ-348/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978656 | RSVA-WZ-351/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978657 | RSVA-WZ-358/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978658 | RSVA-WZ-407/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978659 | RSVA-WZ-441/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978660 | RSVA-WZ-460/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978661 | RSVA-WZ-466/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978663 | RSVA-WZ-490/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978664 | RSVA-WZ-492/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978665 | RSVA-WZ-516/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978666 | RSVA-WZ-536/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978667 | RSVA-YC-161/NX/2015 | 2015 | China | NA1 | 12 |
| MF978668 | RSVA-YC-177/NX/2015 | 2015 | China | NA1 | 12 |
| MF978669 | RSVA-YC-187/NX/2015 | 2015 | China | NA1 | 12 |
| MF978670 | RSVA-YC-188/NX/2015 | 2015 | China | NA1 | 12 |
| MF978671 | RSVA-YC-195/NX/2015 | 2015 | China | NA1 | 12 |
| MF978672 | RSVA-YC-200/NX/2015 | 2015 | China | NA1 | 12 |
| MF978673 | RSVA-YC-202/NX/2015 | 2015 | China | NA1 | 12 |
| MF978674 | RSVA-ZJ-276/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978675 | RSVA-ZJ-288/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978676 | RSVA-ZJ-290/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978677 | RSVA-ZJ-296/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978678 | RSVA-ZJ-298/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978679 | RSVA-ZJ-299/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978680 | RSVA-ZJ-301/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978681 | RSVA-ZJ-302/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978682 | RSVA-ZJ-303/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978683 | RSVA-ZJ-310/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978684 | RSVA-ZJ-315/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978685 | RSVA-ZJ-323/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978686 | RSVA-ZJ-325/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978687 | RSVA-ZJ-332/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978689 | RSVA-ZJ-348/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978691 | RSVA-ZJ-369/ZJ/2015 | 2015 | China | NA1 | 12 |
| MF978692 | RSVA-ZJ-398/ZJ/2015 | 2015 | China | NA1 | 12 |
| MG431254 | STA836 | 2010 | Brazil | NA1 | Di Paola, N. et al. |
| MG431255 | STA839 | 2010 | Brazil | NA1 | Di Paola, N. et al. |
| MG773271 | HRSV/A/BuenosAires/ARG/011/2016 | 2016 | Argentina | NA1 | 23 |
| MG793382 | RSVA/Lebanon/14LJF289/2015 | 2015 | Lebanon | NA1 | Ezzeddine, A.M. |
| MG813979 | A-TX-009b-2012-WGS | 2012 | USA | NA1 | Piedra, F.-A. et al. |
| MG813983 | A-TX-032b-2012-WGS | 2012 | USA | NA1 | Piedra, F.-A. et al. |
| MG813985 | A-TX-010b-2014-WGS | 2014 | USA | NA1 | Piedra, F.-A. et al. |
| MG813987 | A-TX-012b-2015-WGS | 2015 | USA | NA1 | Piedra, F.-A. et al. |
| MG813991 | A-TX-018b-2012-WGS | 2012 | USA | NA1 | Piedra, F.-A. et al. |
| MG839543 | HRSV/A/BuenosAires/ARG/012/2015 | 2015 | Argentina | NA1 | 23 |

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|----------|--------------------------------|------|-------|-----|----|
| MH181878 | KEN/KILIFI/WGS/1022_28/12/2011 | 2011 | Kenya | NA1 | 24 |
| MH181881 | KEN/KILIFI/WGS/1028_02/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181885 | KEN/KILIFI/WGS/1039_25/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181888 | KEN/KILIFI/WGS/1047_15/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181889 | KEN/KILIFI/WGS/1048_16/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181890 | KEN/KILIFI/WGS/1049_17/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181891 | KEN/KILIFI/WGS/1050_17/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181892 | KEN/KILIFI/WGS/1052_25/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181893 | KEN/KILIFI/WGS/1064_24/06/2012 | 2012 | Kenya | NA1 | 24 |
| MH181894 | KEN/KILIFI/WGS/1067_30/06/2012 | 2012 | Kenya | NA1 | 24 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|--------------------------------|-----------------|---------|----------|--------------------------|
| MH181895 | KEN/KILIFI/WGS/1101_25/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181897 | KEN/KILIFI/WGS/1138_14/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181898 | KEN/KILIFI/WGS/1146_03/02/2013 | 2013 | Kenya | NA1 | 24 |
| MH181901 | KEN/KILIFI/WGS/1155_13/03/2013 | 2013 | Kenya | NA1 | 24 |
| MH181902 | KEN/KILIFI/WGS/1159_24/05/2013 | 2013 | Kenya | NA1 | 24 |
| MH181904 | KEN/KILIFI/WGS/1169_07/11/2013 | 2013 | Kenya | NA1 | 24 |
| MH181905 | KEN/KILIFI/WGS/1215_15/04/2014 | 2014 | Kenya | NA1 | 24 |
| MH181906 | KEN/KILIFI/WGS/1314_31/03/2015 | 2015 | Kenya | NA1 | 24 |
| MH181907 | KEN/KILIFI/WGS/1322_17/04/2014 | 2015 | Kenya | NA1 | 24 |
| MH181910 | KEN/KILIFI/WGS/1033_09/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181911 | KEN/KILIFI/WGS/1034_11/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181915 | KEN/KILIFI/WGS/1040_26/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181916 | KEN/KILIFI/WGS/1041_29/03/2012 | 2012 | Kenya | NA1 | 24 |
| MH181918 | KEN/KILIFI/WGS/1044_10/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181920 | KEN/KILIFI/WGS/1053_26/04/2012 | 2012 | Kenya | NA1 | 24 |
| MH181925 | KEN/KILIFI/WGS/1060_11/06/2012 | 2012 | Kenya | NA1 | 24 |
| MH181928 | KEN/KILIFI/WGS/1063_18/06/2012 | 2012 | Kenya | NA1 | 24 |
| MH181929 | KEN/KILIFI/WGS/1066_28/06/2012 | 2012 | Kenya | NA1 | 24 |
| MH181931 | KEN/KILIFI/WGS/1070_23/07/2012 | 2012 | Kenya | NA1 | 24 |
| MH181933 | KEN/KILIFI/WGS/1075_27/10/2012 | 2012 | Kenya | NA1 | 24 |
| MH181938 | KEN/KILIFI/WGS/1080_05/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181940 | KEN/KILIFI/WGS/1082_10/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181941 | KEN/KILIFI/WGS/1083_12/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181943 | KEN/KILIFI/WGS/1086_15/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181950 | KEN/KILIFI/WGS/1093_23/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181953 | KEN/KILIFI/WGS/1096_24/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181954 | KEN/KILIFI/WGS/1097_24/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181959 | KEN/KILIFI/WGS/1103_27/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181960 | KEN/KILIFI/WGS/1104_27/11/2012 | 2012 | Kenya | NA1 | 24 |
| MH181967 | KEN/KILIFI/WGS/1113_03/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181969 | KEN/KILIFI/WGS/1115_04/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181971 | KEN/KILIFI/WGS/1118_12/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181972 | KEN/KILIFI/WGS/1119_15/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181973 | KEN/KILIFI/WGS/1120_19/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181974 | KEN/KILIFI/WGS/1121_21/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181976 | KEN/KILIFI/WGS/1124_24/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181977 | KEN/KILIFI/WGS/1125_26/12/2012 | 2012 | Kenya | NA1 | 24 |
| MH181980 | KEN/KILIFI/WGS/1129_08/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181982 | KEN/KILIFI/WGS/1132_11/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181984 | KEN/KILIFI/WGS/1134_12/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181985 | KEN/KILIFI/WGS/1140_17/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181987 | KEN/KILIFI/WGS/1142_21/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181988 | KEN/KILIFI/WGS/1144_24/01/2013 | 2013 | Kenya | NA1 | 24 |
| MH181989 | KEN/KILIFI/WGS/1151_10/02/2013 | 2013 | Kenya | NA1 | 24 |
| MH181990 | KEN/KILIFI/WGS/1153_12/03/2013 | 2013 | Kenya | NA1 | 24 |
| MH181991 | KEN/KILIFI/WGS/1162_12/10/2013 | 2013 | Kenya | NA1 | 24 |
| MH181993 | KEN/KILIFI/WGS/1166_28/10/2013 | 2013 | Kenya | NA1 | 24 |
| MH181996 | KEN/KILIFI/WGS/1171_12/11/2013 | 2013 | Kenya | NA1 | 24 |
| MH181997 | KEN/KILIFI/WGS/1173_19/11/2013 | 2013 | Kenya | NA1 | 24 |

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|----------|--------------------------------|------|-------|-----|----|
| MH181998 | KEN/Kilifi/WGS/1582_01/04/2014 | 2014 | Kenya | NA1 | 24 |
| MH181999 | KEN/Kilifi/WGS/1583_13/04/2014 | 2014 | Kenya | NA1 | 24 |
| MH182001 | KEN/KILIFI/WGS/1246_26/11/2014 | 2014 | Kenya | NA1 | 24 |
| MH182005 | KEN/KILIFI/WGS/1251_06/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182010 | KEN/KILIFI/WGS/1257_10/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182012 | KEN/KILIFI/WGS/1260_14/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182016 | KEN/KILIFI/WGS/1266_17/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182018 | KEN/KILIFI/WGS/1269_17/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182019 | KEN/KILIFI/WGS/1271_18/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182021 | KEN/KILIFI/WGS/1274_21/12/2014 | 2014 | Kenya | NA1 | 24 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---------------------------------|-----------------|---------|----------|--------------------------|
| MH182022 | KEN/KILIFI/WGS/1275_22/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182023 | KEN/KILIFI/WGS/1278_25/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182024 | KEN/KILIFI/WGS/1279_27/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182025 | KEN/KILIFI/WGS/1281_30/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182026 | KEN/KILIFI/WGS/1282_31/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182027 | KEN/KILIFI/WGS/1283_31/12/2014 | 2014 | Kenya | NA1 | 24 |
| MH182029 | KEN/KILIFI/WGS/1286_04/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182030 | KEN/KILIFI/WGS/1287_06/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182031 | KEN/KILIFI/WGS/1288_07/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182032 | KEN/KILIFI/WGS/1289_08/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182033 | KEN/KILIFI/WGS/1290_08/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182035 | KEN/KILIFI/WGS/1293_24/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182036 | KEN/KILIFI/WGS/1295_27/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182037 | KEN/KILIFI/WGS/1296_29/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182038 | KEN/KILIFI/WGS/1298_31/01/2015 | 2015 | Kenya | NA1 | 24 |
| MH182039 | KEN/KILIFI/WGS/1299_04/02/2015 | 2015 | Kenya | NA1 | 24 |
| MH182040 | KEN/KILIFI/WGS/1301_08/02/2015 | 2015 | Kenya | NA1 | 24 |
| MH182041 | KEN/KILIFI/WGS/1302_13/02/2015 | 2015 | Kenya | NA1 | 24 |
| MH182042 | KEN/KILIFI/WGS/1305_21/02/2015 | 2015 | Kenya | NA1 | 24 |
| MH182046 | KEN/KILIFI/WGS/1311_21/03/2015 | 2015 | Kenya | NA1 | 24 |
| MH182047 | KEN/KILIFI/WGS/1312_22/03/2015 | 2015 | Kenya | NA1 | 24 |
| MH182048 | KEN/KILIFI/WGS/1313_27/03/2015 | 2015 | Kenya | NA1 | 24 |
| MH182050 | KEN/KILIFI/WGS/1318_08/04/2015 | 2015 | Kenya | NA1 | 24 |
| MH182051 | KEN/KILIFI/WGS/1320_12/04/2015 | 2015 | Kenya | NA1 | 24 |
| MH182052 | KEN/KILIFI/WGS/1321_17/04/2015 | 2015 | Kenya | NA1 | 24 |
| MH182054 | KEN/Kilifi/WGS/1585_17/02/2016 | 2016 | Kenya | NA1 | 24 |
| MH182055 | KEN/Kilifi/WGS/1586_28/01/2016 | 2016 | Kenya | NA1 | 24 |
| MH182056 | KEN/Kilifi/WGS/1587_08/02/2016 | 2016 | Kenya | NA1 | 24 |
| MH182057 | KEN/Kilifi/WGS/1588_29/03/2016 | 2016 | Kenya | NA1 | 24 |
| MH182058 | KEN/Kilifi/WGS/1589_26/01/2016 | 2016 | Kenya | NA1 | 24 |
| MH182059 | KEN/Kilifi/WGS/1590_01/02/2016 | 2016 | Kenya | NA1 | 24 |
| MH182060 | KEN/Kilifi/WGS/1591_18/01/2016 | 2016 | Kenya | NA1 | 24 |
| MH182061 | KEN/Kilifi/WGS/1592_07/04/2016 | 2016 | Kenya | NA1 | 24 |
| MH187282 | RSVs/Tehran.IRN/A/53.15/2 [ON1] | 2015 | Iran | NA1 | Salimi, V. et al. |
| MH187283 | RSVs/Tehran.IRN/A/53.15/4 [ON1] | 2015 | Iran | NA1 | Salimi, V. et al. |
| MH187284 | RSVs/Tehran.IRN/A/1.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187285 | RSVs/Tehran.IRN/A/1.16/8 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187286 | RSVs/Tehran.IRN/A/1.16/11 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187287 | RSV/Tehran.IRN/A/1.16/12 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187288 | RSVs/Tehran.IRN/A/1.16/13 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187289 | RSVs/Tehran.IRN/A/2.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187290 | RSVs/Tehran.IRN/A/2.16/2 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187291 | RSVs/Tehran.IRN/A/2.16/3 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187292 | RSVs/Tehran.IRN/A/3.16/5 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187293 | RSVs/Tehran.IRN/A/3.16/8 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187294 | RSVs/Tehran.IRN/A/4.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187295 | RSVs/Tehran.IRN/A/4.16/2 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187296 | RSVs/Tehran.IRN/A/4.16/4 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187297 | RSVs/Tehran.IRN/A/4.16/5 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |

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|----------|---------------------------------|------|------|-----|-------------------|
| MH187298 | RSVs/Tehran.IRN/A/4.16/7 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187299 | RSVs/Tehran.IRN/A/4.16/10 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187300 | RSVs/Tehran.IRN/A/5.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187301 | RSVs/Tehran.IRN/A/6.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187302 | RSVs/Tehran.IRN/A/6.16/2 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187303 | RSVs/Tehran.IRN/A/6.16/3 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187304 | RSVs/Tehran.IRN/A/7.16/3 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187305 | RSVs/Tehran.IRN/A/7.16/2 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187306 | RSVs/Tehran.IRN/A/8.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH187307 | RSVs/Tehran.IRN/A/8.16/2 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---------------------------------|-----------------|-----------|----------|--------------------------|
| MH187308 | RSVs/Tehran.IRN/A/11.16/1 [ON1] | 2016 | Iran | NA1 | Salimi, V. et al. |
| MH279547 | LZ170020448/17 | 2017 | China | NA1 | Qiao, R. et al. |
| MH290724 | LZ170020467/17 | 2017 | China | NA1 | Qiao, R. et al. |
| MH383066 | JF204 | 2014 | Lebanon | NA1 | Hamdan, F. et al. |
| MH447951 | TH/CU91/2011 | 2011 | Thailand | NA1 | Thongpan, I. |
| MH447952 | TH/C3208/2012 | 2012 | Thailand | NA1 | Thongpan, I. |
| MH447954 | TH/CB135/2013 | 2013 | Thailand | NA1 | Thongpan, I. |
| MH447955 | TH/B10625/2014 | 2014 | Thailand | NA1 | Thongpan, I. |
| MH447956 | TH/B10806/2014 | 2014 | Thailand | NA1 | Thongpan, I. |
| MH447957 | TH/B18177/2016 | 2016 | Thailand | NA1 | Thongpan, I. |
| MH447958 | TH/B18247/2016 | 2016 | Thailand | NA1 | Thongpan, I. |
| MH447959 | TH/B23576/2017 | 2017 | Thailand | NA1 | Thongpan, I. |
| MH447960 | TH/B23964/2017 | 2017 | Thailand | NA1 | Thongpan, I. |
| MH760588 | A/NSW/WM0301A/16 | 2016 | Australia | NA1 | 13 |
| MH760589 | A/NSW/WM3629A/16 | 2016 | Australia | NA1 | 13 |
| MH760591 | A/NSW/WM1734B/16 | 2016 | Australia | NA1 | 13 |
| MH760592 | A/NSW/WM0276A/10 | 2010 | Australia | NA1 | 13 |
| MH760593 | A/NSW/WM0231A/10 | 2010 | Australia | NA1 | 13 |
| MH760594 | A/NSW/WM3702A/10 | 2010 | Australia | NA1 | 13 |
| MH760595 | A/NSW/WM0484A/10 | 2010 | Australia | NA1 | 13 |
| MH760596 | A/NSW/WM1135A/10 | 2010 | Australia | NA1 | 13 |
| MH760597 | A/NSW/WM2192A/10 | 2010 | Australia | NA1 | 13 |
| MH760598 | A/NSW/WM1654C/10 | 2010 | Australia | NA1 | 13 |
| MH760600 | A/NSW/WM4173A/11 | 2011 | Australia | NA1 | 13 |
| MH760601 | A/NSW/WM0597B/12 | 2012 | Australia | NA1 | 13 |
| MH760602 | A/NSW/WM1236A/12 | 2012 | Australia | NA1 | 13 |
| MH760603 | A/NSW/WM2829A/12 | 2012 | Australia | NA1 | 13 |
| MH760604 | A/NSW/WM4460A/12 | 2012 | Australia | NA1 | 13 |
| MH760605 | A/NSW/WM1837A/12 | 2012 | Australia | NA1 | 13 |
| MH760606 | A/NSW/WM1008A/13 | 2013 | Australia | NA1 | 13 |
| MH760607 | A/NSW/WM3453A/13 | 2013 | Australia | NA1 | 13 |
| MH760608 | A/NSW/WM1112A/16 | 2016 | Australia | NA1 | 13 |
| MH760609 | A/NSW/WM1514A/16 | 2016 | Australia | NA1 | 13 |
| MH760610 | A/NSW/WM1585A/16 | 2016 | Australia | NA1 | 13 |
| MH760611 | A/NSW/WM0467B/16 | 2016 | Australia | NA1 | 13 |
| MH760612 | A/NSW/WM0166A/16 | 2016 | Australia | NA1 | 13 |
| MH760613 | A/NSW/WM0672A/16 | 2016 | Australia | NA1 | 13 |
| MH760616 | A/NSW/WM0371A/16 | 2016 | Australia | NA1 | 13 |
| MH760617 | A/NSW/WM1681A/16 | 2016 | Australia | NA1 | 13 |
| MH760619 | A/NSW/WM3743A/16 | 2016 | Australia | NA1 | 13 |
| MH760620 | A/NSW/WM1053A/16 | 2016 | Australia | NA1 | 13 |
| MH760621 | A/NSW/WM4241A/16 | 2016 | Australia | NA1 | 13 |
| MH760622 | A/NSW/WM3992A/16 | 2016 | Australia | NA1 | 13 |
| MH760623 | A/NSW/WM4754A/16 | 2016 | Australia | NA1 | 13 |
| MH760624 | A/NSW/WM0737A/16 | 2016 | Australia | NA1 | 13 |
| MH760625 | A/NSW/WM1079A/16 | 2016 | Australia | NA1 | 13 |
| MH760627 | A/NSW/WM1045A/16 | 2016 | Australia | NA1 | 13 |
| MH760628 | A/NSW/WM2369B/16 | 2016 | Australia | NA1 | 13 |
| MH760629 | A/NSW/WM1991A/16 | 2016 | Australia | NA1 | 13 |

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|----------|------------------|------|-----------|-----|----|
| MH760630 | A/NSW/WM0778A/16 | 2016 | Australia | NA1 | 13 |
| MH760631 | A/NSW/WM0879A/16 | 2016 | Australia | NA1 | 13 |
| MH760632 | A/NSW/WM1554A/16 | 2016 | Australia | NA1 | 13 |
| MH760633 | A/NSW/WM1825A/16 | 2016 | Australia | NA1 | 13 |
| MH760634 | A/NSW/WM1254A/16 | 2016 | Australia | NA1 | 13 |
| MH760635 | A/NSW/WM1670A/16 | 2016 | Australia | NA1 | 13 |
| MH760636 | A/NSW/WM2797A/16 | 2016 | Australia | NA1 | 13 |
| MH760638 | A/NSW/WM0230A/16 | 2016 | Australia | NA1 | 13 |
| MH760639 | A/NSW/WM4313A/16 | 2016 | Australia | NA1 | 13 |
| MH760641 | A/NSW/WM1473B/14 | 2014 | Australia | NA1 | 13 |

Supplementary Table S1 (continued). Strains used in this study.

| GenBank accession No. | Strain | Collection year | Country | Genotype | References or authorship |
|-----------------------|---|-----------------|-----------|----------|--------------------------|
| MH760642 | A/NSW/WM2111B/14 | 2014 | Australia | NA1 | 13 |
| MH760643 | A/NSW/WM3837A/14 | 2014 | Australia | NA1 | 13 |
| MH760644 | A/NSW/WM2906A/14 | 2014 | Australia | NA1 | 13 |
| MH760645 | A/NSW/WM0279A/14 | 2014 | Australia | NA1 | 13 |
| MH760646 | A/NSW/WM0644C/14 | 2014 | Australia | NA1 | 13 |
| MH760647 | A/NSW/WM3790A/15 | 2015 | Australia | NA1 | 13 |
| MH760648 | A/NSW/WM2866A/15 | 2015 | Australia | NA1 | 13 |
| MH760649 | A/NSW/WM1676B/15 | 2015 | Australia | NA1 | 13 |
| MH760651 | A/NSW/WM0359B/15 | 2015 | Australia | NA1 | 13 |
| MK109773 | RSVA/Homo sapiens/JOR/D3140/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK109774 | RSVA/Homo sapiens/JOR/C2101/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK109775 | RSVA/Homo sapiens/JOR/B1318/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK109776 | RSVA/Homo sapiens/JOR/D3159/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK109777 | RSVA/Homo sapiens/JOR/D3120/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK109785 | RSVA/Homo sapiens/JOR/D3055/2010 | 2010 | Jordan | NA1 | Tan, G. et al. |
| MK109787 | RSVA/Homo sapiens/JOR/C2152/2011 | 2011 | Jordan | NA1 | Tan, G. et al. |
| MK167035 | 8L8 | 2008 | USA | NA1 | Greninger, A.L. et al. |
| MK167036 | 6B2 | 2006 | USA | NA1 | Greninger, A.L. et al. |
| MK749867 | RSVA/Homo sapiens/NIC/IIIIn_16_0242_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749884 | RSVA/Homo sapiens/NIC/IIIIn_16_0313_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749890 | RSVA/Homo sapiens/NIC/IIIIn_16_0270_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749893 | RSVA/Homo sapiens/NIC/IIIIn_16_0244_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749909 | RSVA/Homo sapiens/NIC/IIIIn_16_0267_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749911 | RSVA/Homo sapiens/NIC/IIIIn_16_0238_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749912 | RSVA/Homo sapiens/NIC/IIIIn_15_0256_01NT/2015 | 2015 | Nicaragua | NA1 | Tan, G. et al. |
| MK749913 | RSVA/Homo sapiens/NIC/IIIIn_16_0250_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MK749917 | RSVA/Homo sapiens/NIC/IIIIn_16_0265_01NT/2016 | 2016 | Nicaragua | NA1 | Tan, G. et al. |
| MN251607 | GH100344/USA/2011 | 2011 | USA | NA1 | Chu, H. et al. |
| MN306017 | SC0135 | 2018 | USA | NA1 | Lin, M.J. et al. |
| MN306021 | SC0237 | 2018 | USA | NA1 | Lin, M.J. et al. |
| MN306029 | SC0398 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN306030 | SC0410 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN306031 | SC0460 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN306045 | SC0850 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN306048 | SC0885 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN306050 | SC1053 | 2019 | USA | NA1 | Lin, M.J. et al. |
| MN310477 | SC0276 | 2018 | USA | NA1 | Lin, M.J. et al. |
| MN531557 | GH300327/USA/2013 | 2013 | USA | NA1 | Chu, H. et al. |
| MN630090 | RSVA/USA/UAMS-DID-009/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630091 | RSVA/USA/UAMS-DID-011/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630092 | RSVA/USA/UAMS-DID-015/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630094 | RSVA/USA/UAMS-DID-018/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630099 | RSVA/USA/UAMS-DID-028/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630100 | RSVA/USA/UAMS-DID-040/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630101 | RSVA/USA/ACRI-037/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630102 | RSVA/USA/ACRI-039/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630103 | RSVA/USA/ACRI-046/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630105 | RSVA/USA/ACRI-056/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MN630106 | RSVA/USA/ACRI-064/2016 | 2016 | USA | NA1 | Kothari, A. et al. |

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|----------|-----------------------------|------|-----------|-----|--------------------------|
| MN630107 | RSVA/USA/ACRI-053/2016 | 2016 | USA | NA1 | Kothari, A. et al. |
| MT422269 | RSVA/Novosibirsk/108Hp/2019 | 2019 | Russia | NA1 | Dubovitskiy, N.A. et al. |
| MT422270 | RSVA/Novosibirsk/138Hp/2019 | 2019 | Russia | NA1 | Dubovitskiy, N.A. et al. |
| MT422271 | RSVA/Novosibirsk/893Hp/2019 | 2019 | Russia | NA1 | Dubovitskiy, N.A. et al. |
| JX198112 | Long | 1956 | USA | 1 | |
| KJ155694 | A2 | 1961 | Australia | 25 | |
| JX198143 | CH-18537 | 1962 | USA | | Tapia, L.I. et al. |
| D00953 | RB 94 | 1969 | Belgium | 26 | |

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Supplementary Table S2. Evolutionary rates for each genotype. As noted, the genotype GA6 was not examined due to small strain numbers (6 strains).

| | Evolutionary rates (95%HPD) (substitutions/site/year) |
|------------------------------|---|
| All RSV-A (1,465 strains) | 7.69×10^{-4} (7.10×10^{-4} - 8.29×10^{-4}) |
| GA1 (35 strains) | 4.48×10^{-4} (2.79×10^{-4} - 6.24×10^{-4}) |
| GA2 (77 strains) | 8.34×10^{-4} (6.43×10^{-4} - 1.04×10^{-3}) |
| GA3 (28 strains) | 8.02×10^{-4} (5.15×10^{-4} - 1.09×10^{-3}) |
| GA4 (17 strains) | 6.04×10^{-4} (2.22×10^{-4} - 1.00×10^{-3}) |
| GA5 (174 strains) | 7.11×10^{-4} (5.82×10^{-4} - 8.34×10^{-4}) |
| GA7 (34 strains) | 7.56×10^{-4} (4.97×10^{-4} - 1.02×10^{-3}) |
| NA1 (1,092 strains) | 7.61×10^{-4} (6.85×10^{-4} - 8.38×10^{-4}) |

Supplementary Table S3. Phylogenetic distances for each genotype.

| | Phylogenetic distance (mean \pm SD) |
|------------------------------|--|
| All RSV-A (1,465 strains) | 0.024 ± 0.021 |
| GA1 (35 strains) | 0.006 ± 0.004 |
| GA2 (77 strains) | 0.012 ± 0.006 |
| GA3 (28 strains) | 0.017 ± 0.007 |
| GA4 (17 strains) | 0.010 ± 0.004 |
| GA5 (174 strains) | 0.010 ± 0.004 |
| GA6 (6 strains) | 0.007 ± 0.004 |
| GA7 (34 strains) | 0.011 ± 0.006 |
| NA1 (1,092 strains) | 0.008 ± 0.003 |