**SUPPLEMENTARY MATERIAL**

**Sypplementary Table S1.** **GenBank accession numbers for the genome segments from each reference strain used in the phylogenetic analyses**. VP, viral structural protein; tc, tissue culture; wt, wildtype; lab- laboratory -generated or –engineered; RVA, Group A rotaviruses; MRC, Medical Research Council; DPRU, Diarrheal Pathogens Research Unit; BRA, Brazil; BGD, Bangladesh; MMR, Myanmar; THA, Thailand; IND, India; PRY, Paraguay; JPN, Japan; ITA, Italy; CHN, China, SVN, Slovenia; KOR, South Korea; CMR, Cameroon; IRL, Ireland; VNM, Vietnam; LKN, Sri lanka; BEL, Belgium; AUS, Australia; CAN, Canada, RUS, Russia; ESP, Spain; DNK, Denmark; VEN, Venezuela; GBR, Great Britain; MLI, Mali; KEN, Kenya; GHA, Ghana; GAB, Gabon.

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| **Segment** | **Genotype** | **Strain Name** | **Nomenclature** | **Accession Number** |
| VP7 | G1 | IALR152 | RVA/Human-wt/BRA/IALR152/1998/G1P[8] | JF968559 |
| G1 | VU05-06-69 | RVA/Human-wt/USA/VU05-06-69/2005/G1P[8] | JF490803 |
| G1 | Strain334 | RVA/Human-wt/BGD/Strain334/2006/G1P[8] | AB534522 |
| G1 | MMA08-10 | RVA/Human-wt/MMR/MMA08-10/2008/G1P[8] | GU598247 |
| G1 | CMH048-04 | RVA/Human-wt/THA/CMH048-04/2006/G1 | EF199711 |
| G1 | Dhaka3-02 | RVA/Human-wt/BGD/Dhaka3-02/2002/G1P[8] | EF690728 |
| G1 | NIV-074150 | RVA/Human-wt/IND/NIV-074150/2007/G1 | JN192059 |
| G1 | NIV-0716541 | RVA/Human-wt/IND/NIV-0716541/2007/G1 | JN192098 |
| G1 | Matlab18-02 | RVA/Human-wt/BGD/Matlab18-02/2002/G1P[8] | EF690747 |
| G1 | Agroj23 | RVA/Human-wt/BGD/Agroj23/2002/G1P[8] | EF690750 |
| G1 | 1679SR | RVA/Human-wt/PRY/1679SR/2008/G1P[8] | KJ412649 |
| G1 | SW20/21 | RVA/Pig-lab/UK/SW20/21/2001/G1P[7] | AF426162 |
| G1 | R144-1999 | RVA/Human-wt/BRA/R144-1999/1999/G1 | JN232049 |
| G1 | AU19 | RVA/Human-wt/JPN/AU19/1998/G1P[6] | AB018697 |
| G1 | BE00015 | RVA/Human-wt/BEL/BE00015/2006/G1P[8] | HQ392100 |
| G1 | CMH042/04 | RVA/Human-wt/THA/ CMH042/04/2006/G1 | EF199713 |
| G1 | mani-375/07 | RVA/Human-wt/IND/mani-375-07/2007/G1P[8] | GQ229043 |
| G1 | mani-365/07 | RVA/Human-wt/IND/mani-365-07/2007/G1P[8] | GQ229042 |
| G1 | mani-140/06 | RVA/Human-wt/IND/mani-140-06/2006/G1P[8] | GQ229041 |
| G1 | mani-63/06 | RVA/Human-wt/IND/ mani-63/06/2006/G1P[8] | GQ229040 |
| G1 | GC06-01 | RVA/Human-wt/JPN/GC06-01/2006/G1 | AB275386 |
| G1 | Mali-137 | RVA/Human-wt/MLI/Mali-137/2008/G1P[8] | KP883198 |
| G1 | Keny-110 | RVA/Human-wt/KEN/Keny-110/2009/G1P[8] | KP882725 |
| G1 | Ghan-145 | RVA/Human-wt/GHA/Ghan-145/2008/G1P[8] | KP882637 |
| G1 | NB-150/BR/97 | RVA/Human-wt/BRA/ NB-150/BR/97/2007/G1/G4 | DQ299880 |
| G1 | Gab262 | RVA/Human-wt/GAB/ Gab262/2011/G1 | KJ425211 |
| G3 | KC814 | RVA/Human-wt/USA/KC814/2001/G3P3[9] | AJ311739 |
| G3 | PAI58 | RVA/Human-wt/ITA/PAI58/1996/G3P[9] | GU296431 |
| G3 | DC1494 | RVA/Human-wt/USA/DC1494/1976/G3P[8] | FJ947282 |
| G3 | agro16c1 | RVA/Pig-wt/BRA/agro16c1/2008/G3P[23] | JX103950 |
| G3 | agro24c2 | RVA/Pig-wt/BRA/agro24c2/2008/G3P[x] | JX103954 |
| G3 | HLJheb-1 | RVA/Pig-wt/CHN/HLJheb-1/2011/G3 | JX498967 |
| G3 | CMP29 | RVA/Pig-wt/THA/CMP29/2008/G3P[13] | AB779619 |
| G3 | P50 | RVA/Pig-wt/SVN/P50/2008/G3 | EU348715 |
| G3 | CMP096 | RVA/Pig-wt/THA/CMP096/2006/G3P[19] | DQ256502 |
| G3 | HeN3 | RVA/Pig-wt/CHN/HeN3/2011/G3 | JX498968 |
| G3 | A131 | RVA/Pig-tc/VEN/A131/1988/G3P[7] | L35055 |
| G3 | PP-1 | RVA/Cow-lab/GBR/PP-1/1976/G3P[7] | AF427124 |
| G3 | MP126 | RVA/Human-wt/IND/MP126/2002/G3 | AF386915 |
| G5 | K158 | RVA/Cow-wt/KOR/K158/2009/G5P[7] | EU541408 |
| G5 | LL4260 | RVA/Human-wt/CHN/LL4260/2001/G5P[6] | EF159576 |
| G5 | DN30209 | RVA/Pig-tc/CHN/DN30209/2009/G5 | JN388691 |
| G5 | LL36755 | RVA/Human-wt/CHN/LL36755/2003/G5P[6] | EF077484 |
| G5 | CMP204 | RVA/Pig-wt/THA/CMP204/2006/G5 | DQ683523 |
| G5 | 6784-2000-ARN | RVA/Human-wt/CMR/6784-2000-ARN/2007/G5P[7] | EF218667 |
| G5 | KH210 | RVA/Human-wt/VNM/KH210/2004/G5P[6] | AB257126 |
| G5 | LL3354 | RVA/Human-wt/CHN/LL3354/2000/G5P[6] | EF159575 |
| G5 | HLJsh-2 | RVA/Pig-wt/CHN/HLJsh-2/2011/G5 | JX498963 |
| G5 | OSU | RVA/Pig-tc/USA/OSU/1976/G5P[7] | KR052761 |
| G5 | OSU | RVA/Pig-tc/USA/OSU/1985/G5P[7] | X04613 |
| G5 | rj10998-05 | RVA/Human-wt/BRA/rj10998-05/2005/G5P[8] | GQ377748 |
| G5 | sp46855-92 | RVA/Human-wt/BRA/sp46855-92/1992/G5P[8] | GQ377738 |
| G5 | df30726-86 | RVA/Human-wt/BRA/df30726-86/1986/G5P[8] | GQ377723 |
| G5 | KJ75 | RVA/Cow-wt/KOR/KJ75/2006/G5 | DQ494394 |
| G9 | CAU 202 | RVA/Human-tc/KOR/CAU 202/2006/G9P[8] | EF059922 |
| G9 | HRP47 | RVA/Human-wt/IND/HRP47/2011/G9 | KC416953 |
| G9 | mani-230/07 | RVA/Human-wt/IND/mani-230-07/2007/G9P[6] | GQ229052 |
| G9 | mani-313/07 | RVA/Human-wt/IND/mani-110-06/2006/G9P[6] | GQ229053 |
| G9 | mani-313 07 | RVA/Human-wt/IND/mani-313-07/2007/G9 | GQ229051 |
| G9 | mani-475/08 | RVA/Human-wt/IND/ mani-475-08/2008/G9 | GQ229054 |
| G9 | S25 | RVA/Human-tc/IND/S25/2002/G9 | AJ491188 |
| G9 | NK022-03 | RVA/Human-wt/THA/NK022-03/2008/G9 | AB436833 |
| G9 | 05SLC002 | RVA/Human-wt/LKA/05SLC002/2005/G9P[8] | AB306264 |
| G9 | DC3 | RVA/Human-wt/USA/DC3/2009/G9P[8] | HQ702226 |
| G9 | KNIH-13 | RVA/Human-wt/KOR/KNIH-13/2006/G9 | DQ990319 |
| G9 | CMP45-08 | RVA/Pig-wt/THA/CMP45-08/2008/G9P[23] | HQ268833 |
|  | | | | |
| VP4 | P8 | BE00001 | RVA/Human-wt/BEL/BE00001/2004/G1P[8] | KC193615 |
| P8 | DC5751 | RVA/Human-wt/USA/DC5751/1991/G3P[8] | FJ947796 |
| P8 | CK00007 | RVA/Human-wt/AUS/CK00007/2004/G1P[8] | JF490157 |
| P8 | PRY-404 | RVA/Human-wt/PRY/PRY-404/1999/G1P[8] | KJ626527 |
| P8 | VU08-09-39 | RVA/Human-wt/USA/VU08-09-39/2008/G12P[8] | JF790352 |
| P8 | H73 | RVA/Human-wt/IND/H73/2011/P[8] | JX411972 |
| P8 | 2009727093 | RVA/Human-wt/USA/2009727093/2009/G9P[8] | HM534675 |
| P8 | DC8 | RVA/Human-wt/USA/DC8/2009/G9P[8] | KC215565 |
| P8 | BE00021 | RVA/Human-wt/BEL/BE00021/2007/G1P[8] | HQ392164 |
| P8 | S-65 | RVA/Human-wt/IND/S-65/2009/P[8] | JN638736 |
| P8 | CAU 202 | RVA/Human-wt/KOR/CAU 202/2012/G9P[8] | EF059923 |
| P8 | Dhaka25 | RVA/Human-wt/BGD/Dhaka25/2002/G12P[8] | DQ146652 |
| P8 | 11SR | RVA/Human-wt/PRY/11SR/2002/G1G9P[8] | KJ627068 |
| P8 | 3SR | RVA/Human-wt/PRY/3SR/2002/G9P[8] | KJ626505 |
| P8 | DC5405 | RVA/Human-wt/USA/DC5405/1991/G1P[8] | KC579975 |
| P8 | MRC-DPRU1424 | RVA/Human-wt/CMR/MRC-DPRU1424/2009/G9P[8] | JN605407 |
| P8 | HRH3 | RVA/Human-wt/IND/HRH3/2011/P[8] | KC416945 |
| P7 | K33-2 | RVA/Cow-wt/KOR/K33-2/2009/G5P[7] | EU541394 |
| P7 | 174-1 | RVA/Pig-wt/KOR/174-1/2006/P[7] | KF500210 |
| P7 | K55 | RVA/Cow-wt/KOR/K55/2009/G5P[7] | EU541395 |
| P7 | D-1 | RVA/Pig-wt/KOR/D-1/2006/G5P[7] | FJ870375 |
| P7 | K5 | RVA/Cow-wt/KOR/K5/2004/P[7] | JX971572 |
| P7 | KJ56-1 | RVA/Cow-wt/KOR/KJ56-1/2004/P[7] | KF500177 |
| P7 | RU172 | RVA/Pig-wt/IND/RU172/2006/G12P[7] | DQ204742 |
| P7 | 2-07-Ire | RVA/Pig-wt/IRL/2-07-Ire/2007/G2P[7] | HM149309 |
| P7 | PP-1 | RVA/Cow-lab/GBR/PP-1/G3P[7] | AF427520 |
| P7 | OSU | RVA/Pig-tc/USA/OSU/1976/G5P[7] | KR052770 |
| P13 | A4 | RVA/Pig-wt/CAN/A4/2012/P[3] | KF501115 |
| P13 | CE-M-06-0010 | RVA/Pig-wt/CAN/CE-M-06-0010/2006/G4P[13] | GU183239 |
| P13 | JP40-H4 | RVA/Pig-wt/JPN/JP40-H4/2006/G9P[13] | AB735639 |
| P13 | JP69-H4 | RVA/Pig-wt/JPN/JP69-H4/2007/G5P[13] | AB735643 |
| P13 | pig9-112d | RVA/Pig-wt/JPN/pig9-112d/2003/G11P[13] | AB701786 |
| P13 | JP40-G8 | RVA/Pig-wt/JPN/JP40-G8/2006/G4P[13] | AB735638 |
| P13 | Kirov-01-99 | RVA/Cow-wt/RUS/Kirov-01-99/1999/P[13] | AY346429 |
| P13 | HP113 | RVA/Pig\_wt/IND/HP113/2007/G6P[13] | DQ003290 |
| P13 | HP140 | RVA/Pig\_wt/IND/HP140/2007/G6P[13] | DQ003291 |
| P23 | TM-a | RVA/Pig-wt/CHN/TM-a/2009/P[13] | KC113250 |
| P23 | 34461-4 | RVA/Pig-wt/ESP/34461-4/2005/G2P[23] | AY768809 |
| P23 | NMTL | RVA/Pig-wt/CHN/NMTL/2008/G9P[23] | JF781161 |
| P23 | DK3981S | RVA/Pig-wt/DNK/DK3981S/2006/G6P[23] | JN410610 |
| P23 | L1-4P | RVA/Pig-wt/ESP/L1-4P/2005/G6P[23] | JN253377 |
| P23 | PGRV16 | RVA/Pig-wt/BRA/PGRV16/2011/G5P[23] | KC254751 |
| P23 | PGRV13 | RVA/Pig-wt/BRA/PGRV13/2011/G5P[23] | KC254748 |
| P23 | CMP40/08 | RVA/Pig-wt/THA/CMP40-08/2008/G3P[23] | HQ268851 |
| P23 | CMP48/08 | RVA/Pig-wt/THA/CMP48/08/2008/G3P[23] | HQ268847 |
| P23 | CMP45/08 | RVA/Pig-wt/THA/ CMP45/08/2008/G9P[23] | HQ268854 |