Table S1: Norovirus VP1 sequences downloaded from GenBank for Figure 4 in this study.

| Accession number | Protein id | Strain     | Genotype | Country       | Year |
|------------------|------------|------------|----------|---------------|------|
| M87661           | AAB50466   | Norwalk    | GI.1     | United States | 1968 |
| L23828           | AAS59229   | SRSV-KY-89 | GI.1     | Japan         | 1989 |
| MH638229         | AXQ39993   | BA81265    | GI.1     | United States | 2017 |
| L07418           | AAA92984   | Southampton| GI.2     | United Kingdom| 1991 |
| FJ515294         | ACU56258   | Leuven     | GI.2     | Belgium       | 2003 |
| JQ743332         | AFK75853   | GI.2       | Gi.2     | United States | 1999 |
| MW445537         | QQL02664   | 18N239     | GI.3     | China         | 2018 |
| MW600284         | QRQ46993   | CFIA-FV-478-13_43479-9 | GI.3  | Canada       | 2017 |
| MW600279         | QRQ46942   | CFIA-FV-448-1b_43479-8 | GI.3  | Canada       | 2017 |
| MW590348         | QRM14432   | CFIA-FV-491-23_43538-14 | GI.3  | Canada       | 2017 |
| MW590347         | QRM14429   | CFIA-FV-491-16_43538-5 | GI.3  | Canada       | 2017 |
| MW590338         | QRM14330   | CFIA-FV-340-1.3_43479-1234 | GI.3  | Canada       | 2017 |
| MW558948         | QRD99198   | CFIA-FVR-002 | GI.3  | Canada       | 2012 |
| MZ462932         | QXD98784   | G7_8       | GI.3     | Mexico        | 2017 |
| MZ462931         | QXD98781   | G5_10      | GI.3     | Mexico        | 2016 |
| MZ462930         | QXD98778   | G5_9       | GI.3     | Mexico        | 2016 |
| MZ462929         | QXD98775   | G2_12      | GI.3     | Mexico        | 2016 |
| MZ021661         | QUF08433   | 20200416_ASE_06_Gi.3 LPV | GI.3  | South Korea  | 2020 |
| MZ021660         | QUF08432   | 20200408_MWE_01_Gi.3 LPV | GI.3  | South Korea  | 2020 |
| MZ021651         | QUF08423   | 20200226_MWE_01_Gi.3 LPV | GI.3  | South Korea  | 2020 |
| MZ021649         | QUF08421   | 20200221_ASE_08_Gi.3 LPV | GI.3  | South Korea  | 2020 |
| MK073893         | AZJ17766   | Nashville-0047 | GI.3  | United States| 2016 |
| MK073892         | AZJ17763   | Nashville-0046 | GI.3  | United States| 2016 |
| MK073887         | AZJ17748   | BayCity-0088 | GI.3  | United States| 2016 |
| KT781411         | AOO95034   | EN-3       | GI.3     | Taiwan        | 2015 |
| U04469           | AAA16285   | DSV395     | GI.3     | Saudi Arabia  | 1990 |
| JN699050         | QPJ58810   | B8         | GI.3     | Central African Republic | 1977 |
| JN699049         | AFN06738   | C9         | GI.3     | French Guiana | 1978 |
| JN699048         | AFN06737   | C91        | GI.3     | French Guiana | 1978 |
| JN699047         | AFN06736   | E8_UG      | GI.3     | Uganda        | 1976 |
| JQ911594         | AFI08231   | 10360      | GI.3     | Viet Nam      | 2010 |
| GQ856473         | ACY00647   | Beijing55042 | GI.3  | China         | 2007 |
| GQ856472         | ACY00645   | Beijing54660 | GI.3  | China         | 2007 |
| GQ856471         | ACY00641   | Beijing54114 | GI.3  | China         | 2007 |
| EF547396         | ABQ44566   | Akabane/991130 | GI.3  | Japan         | 1999 |
| LC378993         | BBD7426    | FS118-2015 | GI.3     | Japan         | 2015 |
| LC378992         | BBD7424    | FS114-2015 | GI.3     | Japan         | 2015 |
| LC378991         | BBD7422    | FE61-2015  | GI.3     | Japan         | 2015 |
| LC378990         | BBD7420    | FE59-2015  | GI.3     | Japan         | 2015 |
| LC378989         | BBD7418    | FE47-2015  | GI.3     | Japan         | 2015 |
| LC378988         | BBD7416    | FE29-2015  | GI.3     | Japan         | 2015 |
| LC378987         | BBD7414    | FE8-2015   | GI.3     | Japan         | 2015 |
| LC378986         | BBD7412    | FE2-2015   | GI.3     | Japan         | 2015 |
| LC378985         | BBD7410    | FS421-2014 | GI.3     | Japan         | 2015 |
| LC378984         | BBD7408    | FE49-2014  | GI.3     | Japan         | 2015 |
| MH218729         | AWR17846   | NORO_90_22_06_2015 | GI.3  | United Kingdom| 2015 |
| MH218728         | AWR17843   | NORO_89_01_04_2015 | GI.3  | United Kingdom| 2015 |
| Accession number | Protein id  | Strain        | Genotype | Country | Year   |
|------------------|-------------|---------------|----------|---------|--------|
| MH218727         | AWR17840    | NORO_87_18_02_2015 | Gi.3     | United Kingdom | 2015   |
| MH218726         | AWR17837    | NORO_85_14_11_2014 | Gi.3     | United Kingdom | 2014   |
| MH218725         | AWR17834    | NORO_84_04_11_2014 | Gi.3     | United Kingdom | 2014   |
| MH218724         | AWR17831    | NORO_83_31_10_2014 | Gi.3     | United Kingdom | 2014   |
| MH218722         | AWR17825    | NORO_81_10_10_2014 | Gi.3     | United Kingdom | 2014   |
| MH218664         | AWR17651    | NORO_206_03_12_2015 | Gi.3     | United Kingdom | 2015   |
| MH218659         | AWR17636    | NORO_198_10_11_2015 | Gi.3     | United Kingdom | 2015   |
| MH218647         | AWR17600    | NORO_179_03_08_2015 | Gi.3     | United Kingdom | 2015   |
| KY934262         | ARI71147    | 0304-19        | Gi.3     | China    | 2015   |
| AF414405         | AAL12968    | Little_Rock/316 | Gi.3     | United States | 1994   |
| AF414403         | AAL12962    | Honolulu/219   | Gi.3     | United States | 1992   |
| AY038598         | AAK84673    | VA98115        | Gi.3     | United States | 1998   |
| KJ196292         | AII73765    | Shimizu/KK2866 | Gi.3     | Japan    | 2007   |
| KJ194510         | AHV83751    | Amsterdam_2_1995 | Gi.3     | Netherlands | 1995   |
| JQ743330         | AFK75851    |                 | Gi.3     | United States | 1999   |
| AF439267         | AAL32455    | Potsdam_196    | Gi.3     | Germany   | 2000   |
| EF547393         | ABQ44563    | Osaka/010314   | Gi.3     | Japan     | 2001   |
| AF145709         | AAD37377    | Stav/95        | Gi.3     | Norway    | 1995   |
| FJ711164         | ACX33983    | JKP_883        | Gi.3     | Sweden    | 2007   |
| FJ711163         | ACX33982    | JKP_881        | Gi.3     | Sweden    | 2007   |
| AJ277612         | CAB89093    | Birmingham     | Gi.3     | United Kingdom | 1993   |
| MTO31988         | QHW16218    | CS0048         | Gi.3     | United States | 2019   |
| MN448477         | QEP29903    | Westport0085   | Gi.3     | United States | 2013   |
| LC122713         | -           | OS-32          | Gi.3     | Japan     | 2012   |
| MW305506         | QPJ38855    | DS275          | Gi.3     | Saudi Arabia | 1990   |
| AB042808         | BAB18267    | Chiba407       | Gi.4     | Japan     | 1987   |
| LN854563         | CRL46952    | Groningen      | Gi.4     | Netherlands | 2011   |
| MN938461         | QHH18441    | 34             | Gi.4     | China     | 2019   |
| AJ277614         | CAB89095    | Musgrove       | Gi.5     | United Kingdom | 1989   |
| AF414406         | AAL12971    | Appalachiocola_Bay/318 | Gi.5 | United States | 1995   |
| AM263418         | CAX2226     | Babbacombe     | Gi.5     | United Kingdom | 1996   |
| AF093797         | AAC64603    | BSS_Hesse      | Gi.6     | Germany   | 1997   |
| AF538678         | AAN15138    | VA497          | Gi.6     | United States | 1999   |
| EF547395         | ABQ44565    | Osaka321       | Gi.6     | Japan     | 2000   |
| AJ277609         | CAB89090    | Winchester     | Gi.7     | United Kingdom | 1994   |
| MTO372469        | QJD23077    | Callao0904    | Gi.7     | United States | 2017   |
| MW305508         | QPJ38861    | DS386          | Gi.7     | Saudi Arabia | 1990   |
| JN005886         | AEQ77282    | TCH-060        | Gi.7     | United States | 2003   |
| AB758449         | BAM65003    | Miyagi         | Gi.7     | Japan     | 2009   |
| KX907729         | APA31976    | CS5567         | Gi.7     | United States | 2011   |
| KU311161         | ALT54488    | Alberta_E1404  | Gi.7     | Canada    | 2012   |
| AF538679         | AAN15140    | Boxer          | Gi.8     | United States | 2001   |
| GU299761         | ADB54834    | 200890321      | Gi.8     | United States | 2008   |
| KC473548         | AGIS2176    | HuzhouN10     | Gi.8     | China     | 2008   |
| GQ856462         | ACY00615    | Beijing53671   | Gi.8     | China     | 2007   |
| KJ196298         | AII73783    | Nagoya_K531   | Gi.8     | Japan     | 2007   |
| MT372476         | QJD23089    | Baltimore16275 | Gi.8     | United States | 2010   |
| HQ637267         | AEA02124    | Vancouver730   | Gi.9     | Canada    | 2004   |
| KF586507         | AHA91654    | CAIQ12110628   | Gi.9     | China     | 2012   |
| Accession number | Protein id  | Strain        | Genotype | Country   | Year |
|------------------|-------------|---------------|----------|-----------|------|
| KF586508         | AHA91656    | CAIQ12110630  | Gl.9     | China     | 2012 |
| KX907731         | APA31982    | SC6350        | Gl.9     | United States | 2016 |
| MH702262         | AXQ39901    | ETR-NV-112    | Gl.9     | Nepal     | 2014 |
| MT372474         | QJD23083    | Baltimore16082| Gl.9     | United States | 2013 |
| GI.3_consensus | MMMASKDAPVFNQDKTGAQCDQVEAMTAPIFSEMYAVGADNAAATCQVMHDPWQNYQQVRQPELTSPNMYTGDLDQPLNPIFLSLAQY | 10       20       30       40       50       60       70       80       90       100 |
| GI.NA1_consensus | ..........D..V..I...........S.F.........V........V.......Q................A........ | 110      120      130     140     150     160     170     180     190     200 |
| GI.NA2_consensus | ..........A.D.V.........V........S.F........S.F........Q......................... | 210      220      230     240     250     260     270     280     290     300 |
| GI.3_consensus | NGVUNKNVKVLLAGNATAGKIIICIEPQFAQN1SIAQATMFVRVPLEPVNLPLNLSRLSVPVSLIKSMVSRDQGMVQMGRVLDQLQCTTPTASQQLCKIRGVSHEA | 310      320      330     340     350     360     370     380     390     400 |
| GI.NA1_consensus | ............R.............TS..........M............I........T.R.............N........ | 410      420      430     440     450     460     470     480     490     500 |
| GI.NA2_consensus | ............R.............TS........SV........M............I........T.R.........N........ | 510      520      530     540     550     560     570     580     590     600 |

**Supplementary Figure S1.** Alignment of complete VP1 amino acid sequence of GL3, GLNA1 and GLNA2 genotypes. Amino acids are shown according to the RasMol amino acid scheme colours. Dots represent conserved residues and black boxes show deletions and insertions with respect to the GI.3 consensus sequence.