**Supplementary Table 2:** List of sequences used for phylogenetic analysis.

| **Field strain\*** | **GenBank** | **Country** | **Field strain** | **GenBank** | **Country** | **Field strain** | **GenBank** | **Country** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RS-6 | MF079253 | Brazil | Guangdong-SG1 | MF589105 | China | Shandong-2 | KY778777 | China |
| RS-8 | MF079254 | Brazil | Guangdong-X1 | MF589118 | China | KU-1601 | KY996337 | Korea |
| Fujian-FZ | MF589108 | China | Guangxi-LD4 | MF589120 | China | KU-1602 | KY996338 | Korea |
| Guangdong-HZ4 | MF589103 | China | Guangxi-LD5 | MF589121 | China | KU-1603 | KY996339 | Korea |
| Guangdong-MX3 | MF589104 | China | Guangxi-WZ | MF589123 | China | KU-1604 | KY996340 | Korea |
| Guangxi-NK | MF589122 | China | Henan-13 | KY075988 | China | KU-1605 | KY996341 | Korea |
| Anhui-14 | MF084994 | China | Hubei-610 | KY354038 | China | KU-1606 | KY996342 | Korea |
| CC2016 | KY421348 | China | Hubei-618 | KY354039 | China | KU-1607 | KY996343 | Korea |
| CCV-A | KY363870 | China | Hunan-B8 | MF589124 | China | KU-1608 | KY996344 | Korea |
| CCV-B | KY363871 | China | Hunan-CD33 | MF589125 | China | KU-1609 | KY996345 | Korea |
| CCV-C | KY363872 | China | Hunan-XHD2 | MF589129 | China | PCK3-1701 | MF611876 | Korea |
| Chongqing-147 | KY075990 | China | Jiangxi-1 | MF589130 | China | PCK3-1702 | MF611877 | Korea |
| Chongqing-148 | KY075991 | China | Jiangxi-3 | MF589106 | China | PCK3-1703 | MF611878 | Korea |
| Chongqing-150 | KY075992 | China | Jiangxi-62 | KY075989 | China | IH |  | Korea |
| Chongqing-155 | KY075993 | China | Jiangxi-G1 | MF589131 | China | SJ |  | Korea |
| Chongqing-156 | KY075994 | China | Jiangxi-QN3 | MF589132 | China | 2164 | KX458235 | USA |
| Fujian-12 | KY075987 | China | Shanghai-0706 | KY865242 | China | 29160 | KT869077 | USA |
| Fujian-5 | KY075986 | China | Shanghai-0708 | KY865243 | China | 29160-1 | NC031753 | USA |
| Fujian-HWK1 | MF589109 | China | YiY-1-11 | KY484769 | China | MO2015 | KX778720 | USA |
| Fujian-HWK2 | MF589110 | China | YiY-2-11 | KY484770 | China | MN2016 | KX898030 | USA |
| Fujian-KP1 | MF589111 | China | Guangdong-GZ | MF589113 | China | SD2016 | KX966193 | USA |
| GD2016 | KY418606 | China | Guangxi-L2 | MF589119 | China | CO2017 | MF162298 | USA |
| GD2016-1 | KY421347 | China | Hunan-CZ | MF589126 | China | MN2017 | MF162299 | USA |
| Guangdong-CH | MF589112 | China | Hunan-HWF2 | MF589127 | China | L11-181 |  | Vietnam |
| Guangdong-HY | MF589114 | China | Hunan-HWF3 | MF589128 | China | L16-2931 |  | Vietnam |
| Guangdong-HY1 | MF589102 | China | Jiangxi-B1 | MF589107 | China | L16-2932 |  | Vietnam |
| Guangdong-JM1 | MF589115 | China | Jiangxi-S1 | MF589133 | China | L17-297 |  | Vietnam |
| Guangdong-MX1 | MF589116 | China | Jiangxi-XY | MF589134 | China | L17-307 |  | Vietnam |
| Guangdong-SG | MF589117 | China | Shandong-1 | KY778776 | China |  |  |  |

\*Except for L11-181 which was collected in 2011, all of field PCV3 strains were collected from 2015-2017.