**Table S1.** Sequences of porcine parainfluenza virus 1 used for designing primers and probes.

| No. | Strain | Country | Year | GenBank No. |
|---|---|---|---|---|
| 1 | S033N | Hong Kong | 2009 | JX857410 |
| 2 | S119N | Hong Kong | 2009 | JX857411 |
| 3 | S206N | Hong Kong | 2010 | JX857409 |
| 4 | 3103-1 | USA | 2015 | KT749883 |
| 5 | 15TOSU0582 | USA | 2015 | MF567967 |
| 6 | USA/MN25890NS/2016 | USA | 2016 | MF681710 |
| 7 | USA/IA84915LG/2017 | USA | 2017 | MG753974 |
| 8 | KS17-258 | USA | 2017 | MH396493 |
| 9 | Chile/VN14014564/2019 | Chile | 2019 | MT497920 |
| 10 | Chile/VN14012673/2018 | Chile | 2018 | MT497921 |
| 11 | gd2018 | China | 2018 | MK395271 |
| 12 | ZJ03 | China | 2019 | OK044760 |
| 13 | ZJ04 | China | 2019 | OK044761 |
| 14 | ZJ05 | China | 2020 | OK044762 |
| 15 | ZJ06 | China | 2020 | OK044763 |
| 16 | ZJ10 | China | 2019 | OK044767 |
| 17 | ZJ11 | China | 2020 | OK044768 |
| 18 | ZJ13 | China | 2018 | OK044770 |
| 19 | ZJ16 | China | 2020 | OK044772 |
| 20 | ZJ17 | China | 2019 | OK044773 |
| 21 | ZJ18 | China | 2020 | OK044774 |
| 22 | GER/LEHJN/2018 | Germany | 2018 | MT995732 |
| 23 | KPPIV1-2201 | South Korea | 2022 | KT749883 |