

**Table S1.**

Similarity comparison of the genomic sequence between three representative PCV4 strains and other strains.

| Isolates  | Similarity comparison of genomic sequences in PCV4 strains (%) |                     |                   |
|-----------|--|---------------------|-------------------|
|           | PCV4a-1<br>MT193105  | PCV4a-2<br>MT015686 | PCV4b<br>MK986820 |
| MT193106  | 99.5   | 99.0                | 98.7              |
| MW600960  | 99.3   | 98.9                | 98.5              |
| MW600959  | 99.2   | 98.7                | 98.4              |
| MW600958  | 99.4   | 99.0                | 98.6              |
| MW600957  | 99.0   | 98.5                | 98.2              |
| MW600956  | 99.1   | 98.6                | 98.3              |
| MW600955  | 99.3   | 98.9                | 98.5              |
| MW600954  | 99.4   | 99.0                | 98.6              |
| MW600953  | 99.2   | 98.7                | 98.4              |
| MW600952  | 99.3   | 98.8                | 98.5              |
| MW600951  | 99.5   | 99.1                | 98.8              |
| MW600950  | 99.4   | 98.9                | 98.7              |
| MW600949  | 99.4   | 99.0                | 98.6              |
| MW600948  | 99.3   | 98.8                | 98.5              |
| MW600947  | 99.3   | 98.8                | 98.5              |
| MW538943  | 99.3   | 98.9                | 98.5              |
| MW262984  | 99.1   | 99.8                | 98.3              |
| MW262983  | 99.0   | 99.7                | 98.2              |
| MW262982  | 99.1   | 99.8                | 98.3              |
| MW262981  | 99.0   | 99.7                | 98.2              |
| MW262980  | 99.0   | 99.7                | 98.2              |
| MW262979  | 99.0   | 99.7                | 98.2              |
| MW262978  | 99.2   | 99.8                | 98.4              |
| MW262977  | 99.1   | 99.8                | 98.3              |
| MW262976  | 99.2   | 99.8                | 98.4              |
| MW262975  | 99.1   | 99.8                | 98.3              |
| MW262974  | 99.1   | 99.8                | 98.3              |
| MW262973  | 99.1   | 99.8                | 98.3              |
| MW084633  | 99.5   | 99.2                | 98.8              |
| MT882412  | 98.8   | 98.5                | 99.5              |
| MT882411  | 98.9   | 98.5                | 99.5              |
| MT882410  | 98.8   | 98.5                | 99.5              |
| MT882344  | 98.8   | 98.4                | 100.0             |
| MT769268  | 99.5   | 99.1                | 98.8              |
| MT721742  | 98.4   | 98.1                | 99.2              |
| MT311854  | 99.4   | 99.0                | 98.8              |
| MT311853  | 99.2   | 98.7                | 98.6              |
| MT311852  | 99.4   | 98.9                | 98.6              |
| MT015686  | 99.2   | 100.0               | 98.4              |
| MK986820  | 98.8   | 98.4                | 100.0             |
| MT193105  | 100.0  | 99.2                | 98.8              |
| NC_055580 | 98.8   | 98.4                | 100.0             |

