## **Supplementary Material**

## Supplementary Figure 1. Defining an RdRp domain.

When the detected sequence distance was less than 500 amino acid length in the hmmsearch results, we regarded them as a single region as a domain.

## Supplementary Figure 2. Comparison of NeoRdRp-HMM and NeoRdRp-seq.

NeoRdRp-HMM and NeoRdRp-seq with an E-values of (a) 1E-10, (b) 1E-20, and (c) 1E-30 were compared. Pink, NeoRdRp-HMM; purple, NeoRdRp-seq.

## Supplementary Figure 3. Comparison of NeoRdRp-HMM and RVDB-prot.

NeoRdRp-HMM and NeoRdRp-seq with E-values of (a) 1E-10, (b) 1E-20 and (c) 1E-30 were compared. Pink, NeoRdRp-HMM; purple, NeoRdRp-seq; green, RVDB-prot.

Supplementary Table 1. 836 RdRp genes in the UniProt KB database.

Supplementary Table 2. NeoRdRp-HMM or NeoRdRp-seq searches for each E-value threshold.

Supplementary Table 3. Summary of the scores for each NeoRdRp-HMM profile.

Supplementary Table 4. Unannotated RdRps in metatranscriptome data detected by NeoRdRp.





