**Virologica Sinica**

**Supplementary Data**

**Characterization of bacteriophage BUCT631 lytic for K1 *Klebsiella pneumoniae* and its therapeutic efficacy in *Galleria mellonella* larvae**

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**Supplementary Table S1** Determination of drug resistance in K1 *K. pneumoniae* (agar dilution method).

|  |  |
| --- | --- |
| Antibiotics | *Klebsiella pneumoniae* strains |
| 064 | 2752 | K7 | 2755 | S-2007 | 081 | 2024 |
| Amikacin | S | R | R | R | S | S | S |
| Aztreonam | S | I | R | R | S | R | S |
| Cefepime | S | S | R | R | S | R | S |
|  Cefoperazone/Sulbactam | S | I | R | R | S | R | R |
|  Ceftazidime | S | S | R | R | S | R | R |
| Ciprofloxacin | S | S | S | S | S | R | I |
| Imipenem | S | S | R | S | S | S | R |
| Meropenem | S | S | R | S | S | S | S |
| Minocycline | S | S | R | R | S | I | S |
| Piperacillin/Tazobactam | S | I | S | S | S | R | R |
| Tigecycline | S | S | S | R | S | S | S |
| Tobramycin | S | S | R | R | S | R | S |
| Sulphamethoxazole/trimethoprim | S | S | R | R | S | S | S |
| Doxycycline | S | S | R | R | S | R | S |
| Ticarcillin/Clavulanate | S | R | S | R | S | R | S |

R: resistance; I: intermediate; S: sensitivity

**Supplementary Table S2** The conserved domains found in the hypothetical protein of BUCT631 genome.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ORF | Hit type | PSSM-ID | Interval | E-Value | Accession | Description |
| 15 | Superfamily  | 164817 | 3–38 | 1.89e−03 | cl10220 | Hypothetical protein |
| 16 | Superfamily | 436822 | 5–98 | 3.15e−38 | pfam18909 | Siphovirus protein of unknown function (DUF5664) |
| 26 | Superfamily | 222843 | 1–228 | 1.41e−124 | PHA02030 | Hypothetical protein |
| 27 | Superfamily | 275231 | 6–31 | 8.73e−03 | cl22805 | Small Trp-rich protein |
| 44 | Superfamily | 368775 | 4–65 | 2.38e−12 | cl05604 | Protein of unknown function (DUF987) |

**Supplementary Table S3** The structural proteins predicted in the hypothetical protein of BUCT631 genome using PhANNs.

|  |  |
| --- | --- |
| ORFs | Predicted protein function |
| 12 | Tail fiber |
| 29 | portal |
| 55 | Minor capsid |



**Supplementary Fig. S1** Morphology of the *G. mellonella* in each group in the phage treatment experiment.