

CPO20240005 is an KPC-2-producing *Klebsiella pneumoniae* strain from Denmark isolated in 2024

Sequence type:

ST39

Genotype:

| Antimicrobial agent | Resistance gene/mutations |
|---------------------------------|--|
| Carbapenems | <i>bla</i> _{KPC-2} |
| Third generation cephalosporins | <i>bla</i> _{CTX-M-15} , <i>bla</i> _{SHV-187} |
| Other beta-lactams | <i>bla</i> _{OXA-1} , <i>bla</i> _{TEM-1B} |
| Colistin | Not detected |
| Fluoroquinolones | <i>oqxA</i> , <i>oqxB</i> , <i>qnrS1</i> |
| Aminoglycosides | <i>aac(6')-lb-cr</i> , <i>aadA1</i> , <i>ant(2")-la</i> |
| Tetracyclines | Not detected |
| Trimethoprim | Not detected |
| Sulphonamide | <i>sul1</i> |
| Fosfomycin | <i>fosA</i> |

Phenotype:

| Antimicrobial agent | Reference MIC (mg/L) | Reference inhibition zone (mm) ¹ | Interpretation ² | WT/NWT ³ |
|-------------------------------|-------------------------|--|-----------------------------|---------------------|
| Piperacillin-tazobactam | >64 | 6 | R | NWT |
| Cefiderocol | ND | 23-27 | S | WT |
| Cefotaxime | >8 | 6 | R | NWT |
| Ceftazidime | >16 | 6 | R | NWT |
| Ceftazidime-avibactam | 1 | 16-21 | S | ECOFF NA |
| Ceftolozane-tazobactam | >16 | 6-11 | R | NWT |
| Ertapenem | >4 | 6 | R | NWT |
| Imipenem | >16 | 6-8 | R | NWT |
| Imipenem-relebactam | 0.5-1 | 21-25 ⁴ | S | ECOFF NA |
| Meropenem | >16 | 6 | R | NWT |
| Meropenem-vaborbactam | 0.5-1 | 17-20 ⁴ | S | ECOFF NA |
| Aztreonam | >16 | 6 | R | NWT |
| Aztreonam-avibactam | 0.25-0.5 | 25-29 | S | WT |
| Ciprofloxacin | >4 | 6 | R | NWT |
| Levofloxacin | >4 | 6 | R | NWT |
| Amikacin | 2-4 | 18-22 | S | WT |
| Gentamicin | 16 | 9-11 | R | NWT |
| Tobramycin | >16 | 6 | R | NWT |
| Colistin | 0.25-0.5 | - | S | WT |
| Trimethoprim-sulfamethoxazole | 0.5 | 15-19 | S | WT |

ND: not determined; NA: not available.

¹Using EUCAST disk diffusion methodology (https://www.eucast.org/ast_of_bacteria/disk_diffusion_methodology)

²SIR-categorization according to The European Committee on Antimicrobial Susceptibility Testing.

Breakpoint tables for interpretation of MICs and zone diameters. Version 15.0, 2025. <https://www.eucast.org>.

³Categorization into wild type (WT) or non-wild type (NWT) according to available epidemiological cut-off values (ECOFF) available at <https://mic.eucast.org/>

⁴Inhibition zones are close to the breakpoint, increasing the risk of erroneous SIR categorisation.