



## NDM-1 STRAINS

In the last decade, confirmed NDM-1 strains have been attributed to numerous nosocomial infections worldwide. Regrettably, the isolation and identification of NDM-1 strains is time consuming and often not routinely available in clinical laboratories, further contributing to escalating mortality rates.

ATCC understands the danger and growing concern behind the spread of multidrug-resistance strains. To aid in the prevention and treatment of NDM-1-associated infections, ATCC has acquired and authenticated multidrug-resistant prokaryotic isolates known to produce NDM-1.

Each clinical strain has undergone biochemical testing, extensive antibiotic profiling, and genomic analysis to verify:

- Species authentication
- NDM-1 production
- Multidrug-resistance

The table provided below lists the NDM-1 strains available from ATCC.

### ATCC® NDM-1 Strains

ATCC® No.	Strain Description	Strain Designation	Presence of Select Virulence Genes
<a href="#">BAA-2146™</a>	<i>Klebsiella pneumoniae</i>	1000527, 7561	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2452™</a>	<i>Escherichia coli</i>	NDM-1	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2468™</a>	<i>Enterobacter cloacae</i>	1000654	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2469™</a>	<i>Escherichia coli</i>	1001728	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2470™</a>	<i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i>	1002565	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2471™</a>	<i>Escherichia coli</i>	1100101	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2472™</a>	<i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i>	1100975	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -
<a href="#">BAA-2473™</a>	<i>Klebsiella pneumoniae</i>	1100770	<i>bla</i> <sub>NDM</sub> +/ <i>bla</i> <sub>KPC</sub> -

### ATCC® NDM-1 Panel

The strains are available individually, or grouped together in the ATCC® NDM-1 Strains Panel (ATCC® MP-18™) to allow for convenience in ordering and bulk discount pricing. The strains are ideal for the development, verification, and evaluation of:

- Rapid detection methods
- Innovative therapeutic techniques
- Novel antibiotics
- Updated sterility protocols

ATCC hopes that with your diligent research and our authenticated strains, we can stop the spread of these superbugs together!

### Background on NDM-1

Gram-negative prokaryotes expressing New Delhi metallo-β-lactamase (NDM-1), an enzyme that confers resistance to beta-lactam antibiotics including last-resort carbapenem antibiotics, are frequently multi-drug resistant. NDM-1 is encoded by the plasmid-associated gene, *bla*<sub>NDM</sub>. Horizontal transfer of this mobile genetic element has allowed NDM-1 to be passed between Enterobacteriaceae genera commonly found in the human microbiome, including *Escherichia coli*, *Enterobacter cloacae*, and *Klebsiella pneumoniae*. The spread of these multidrug-resistant strains can be further enhanced by inadvertent transmission between immunocompromised patients in critical care facilities or through the transfer of infected patients between healthcare facilities.

### ATCC® NDM-1 Panel (MP-18™)

Take advantage of convenient ordering and bulk discounts associated with purchasing an ATCC panel. The ATCC® NDM-1 Panel (MP-18™) is comprised of the following strains:

- ATCC® [BAA-2468™](#)
- ATCC® [BAA-2469™](#)
- ATCC® [BAA-2470™](#)
- ATCC® [BAA-2471™](#)
- ATCC® [BAA-2472™](#)
- ATCC® [BAA-2473™](#)

Enhance your research today with ATCC® [MP-18™](#).

ATCC® NDM-1 Strains – Antibiotic Profiles

		<a href="#">BAA-2146™</a>	<a href="#">BAA-2452™</a>	<a href="#">BAA-2468™</a>	<a href="#">BAA-2469™</a>	<a href="#">BAA-2470™</a>	<a href="#">BAA-2471™</a>	<a href="#">BAA-2472™</a>	<a href="#">BAA-2473™</a>
Penicillins	Amoxicillin/ Clavulanic Acid	R	R	R	R	R	R	R	R
	Ticarcillin	R	R	R	R	R	R	R	R
	Ticarcillin/ Clavulanic Acid	R	Not Tested	R	R	R	R	R	R
	Piperacillin	R	R	R	R	R	R	R	R
	Ampicillin	R	R	R	R	R	R	R	R
	Ampicillin/ Sulbactam	R	R	R	R	R	R	R	R
Cephalosporins	Cefalotin	R	R	R	R	R	R	R	R
	Cefuroxime	R	R	R	R	R	R	R	R
	Cefuroxime Axetil	R	R	R	R	R	R	R	R
	Cefotetan	R	R	R	R	R	R	R	R
	Cefpodoxime	R	R	R	R	R	R	R	R
	Cefotaxime	R	R	R	R	R	R	R	R
	Ceftizoxime	R	R	R	R	R	R	R	R
	Cefazolin	R	R	R	R	R	R	R	R
	Cefoxitin	R	R	R	R	R	R	R	R
	Ceftazidime	R	R	R	R	R	R	R	R
	Ceftriaxone	R	R	R	R	R	R	R	R
Cefepime	R	R	R	R	R	R	R	R	
Carbapenems	Doripenem	R	Not Tested	R	R	R	R	R	R
	Meropenem	R	R	R	R	R	R	R	R
	Ertapenem	R	R	R	R	R	R	R	R
	Imipenem	R	R	R	R	R	R	S	R
Quinolones	Nalidixic Acid	R	S	R	R	R	R	R	R
	Moxifloxacin	R	S	R	R	R	R	R	R
	Norfloxacin	R	S	R	R	R	R	R	R
	Ciprofloxacin	R	S	R	R	R	R	R	R
	Levofloxacin	R	S	R	R	R	R	R	R
Amino-glycosides	Amikacin	R	R	R	R	R	I	R	R
	Gentamicin	R	R	R	R	R	R	R	R
	Tobramycin	R	R	R	R	R	R	R	R
Other	Tetracycline	R	S	R	R	R	R	R	R
	Tigecycline	R	S	R	S	S	S	R	R
	Nitrofurantoin	R	S	R	S	R	I	R	R
	Aztreonam	R	R	R	R	R	R	R	S
	Trimethoprim/ Sulfamethoxazole	R	S	R	R	R	R	R	R

R = Resistant, S = Susceptible, I = Intermediate susceptibility

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Learn more about ATCC Microbial Panels at [www.atcc.org/mp](http://www.atcc.org/mp)

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