

Table 1A-1. Enterobacterales (excluding *Salmonella* and *Shigella* spp.)^a

Tier 1: Antimicrobial agents that are appropriate for routine, primary testing and reporting	Tier 2: Antimicrobial agents that are appropriate for routine, primary testing but may be reported following cascade reporting rules established at each institution	Tier 3: Antimicrobial agents that are appropriate for routine, primary testing in institutions that serve patients at high risk for MDROs but should only be reported following cascade reporting rules established at each institution	Tier 4: Antimicrobial agents that may warrant testing and reporting by clinician request if antimicrobial agents in other tiers are not optimal because of various factors
Ampicillin			
Cefazolin	Cefuroxime		
Cefotaxime or ceftriaxone ^b	Cefepime ^c		
	Ertapenem	Cefiderocol	
	Imipenem	Aztreonam-avibactam	
	Meropenem	Ceftazidime-avibactam	
		Imipenem-relebactam	
Amoxicillin-clavulanate Ampicillin-sulbactam			
	Piperacillin-tazobactam		
	Gentamicin	Tobramycin	Plazomicin
	Amikacin		
Ciprofloxacin			
Levofloxacin			
Trimethoprim-sulfamethoxazole			
	Cefotetan		
	Cefoxitin		
	Tetracycline		
			Aztreonam ^d
			Ceftaroline ^b
			Ceftazidime ^b
			Ceftolozane-tazobactam
Urine Only			
Cefazolin (surrogate for uncomplicated UTI) ^e			
Nitrofurantoin			
		Fosfomycin ^f (<i>Escherichia coli</i>)	

Abbreviations: MDRO, multidrug-resistant organism; UTI, urinary tract infection.

Table 1A-1. Enterobacterales (Continued)**Footnotes**

- a. See Appendix B for species-specific intrinsic resistance profiles. If an antimicrobial agent–organism combination that is defined as intrinsically resistant is tested, the result should be reported as resistant. Consideration may be given to adding comments regarding intrinsic resistance of agents not tested.
- b. *Citrobacter freundii* complex, *Enterobacter cloacae* complex, *Hafnia alvei*, *Klebsiella* (formerly *Enterobacter*) *aerogenes*, *Morganella morganii*, *Providencia* spp., *Serratia marcescens*, and *Yersinia enterocolitica* may test susceptible to ceftriaxone, cefotaxime, ceftazidime, and ceftaroline, but these agents may be ineffective against these genera within a few days after initiation of therapy due to derepression of inducible AmpC β -lactamase. The risk of AmpC derepression during therapy is moderate to high with *C. freundii* complex, *E. cloacae* complex, and *K. aerogenes* and appears to be less frequent with *M. morganii*, *Providencia* spp., and *S. marcescens*.¹ Therefore, isolates that are initially susceptible may become resistant. Testing subsequent isolates may be warranted if clinically indicated.
- c. Cefepime should be considered a tier 1 agent for testing and/or reporting of *C. freundii* complex, *E. cloacae* complex, *H. alvei*, *K. aerogenes*, *M. morganii*, *Providencia* spp., *S. marcescens*, and *Y. enterocolitica* (see footnote b).¹
- d. In institutions that serve patients at high risk for metallo- β -lactamase–producing Enterobacterales, aztreonam may be considered a tier 3 agent following cascade reporting rules established at the institution.
- e. See cefazolin comments in Table 2A-1 for using cefazolin as a surrogate test for oral cephalosporins and for reporting cefazolin when used for therapy in uncomplicated UTIs.
- f. Report only on *E. coli* isolated from the urinary tract.

Reference for Table 1A-1

- ¹ Tamma PD, Aitken SL, Bonomo RA, Mathers AJ, van Duin D, Clancy CJ. IDSA 2024 guidance on the treatment of antimicrobial resistant gram-negative infections. Accessed 10 October 2025. <https://www.idsociety.org/practice-guideline/amr-guidance/>

NOTE: Information in boldface type is new or modified since the previous edition.