



2019 Cumulative antibiograms for select companion animal isolates

Antibiograms are cumulative antimicrobial susceptibility test (AST) reports of select bacterial isolates intended to show resistance trends over time. They are useful in monitoring antimicrobial resistance in a population over time and help clinicians choose empiric therapy until an AST report is available from the laboratory for a particular isolate.

This report was assembled using laboratory data from selected animal species and sample sources with at least 30 different AST reports of a bacterial isolate. Most isolates originated from samples submitted from animals in North Dakota and Minnesota. Duplicate samples were eliminated by only including the first submission of a sample in the antibiogram report, if a specimen from the same animal was submitted multiple times.

Antibiograms do not represent isolates from all patient populations and may vary greatly by geographic region or species. Antibiograms are intended for use in conjunction with traditional culture and sensitivity testing; samples must still be sent to the laboratory for testing. To obtain reliable results samples should always be collected prior to administering antimicrobial therapy.

2019 Antibigrams- Percent susceptible	<i>Staphylococcus pseudintermedius</i> (Canine ear)	<i>Pseudomonas aeruginosa</i> (Canine ear)	<i>Escherichia coli</i> (Canine urine)	<i>Proteus mirabilis</i> (Canine urine)	<i>Escherichia coli</i> (Feline urine)
IR=intrinsic resistance					
Number of isolates tested	53	30	122	53	38
Amikacin		63	96	87	89
Amoxicillin-clavulanic acid	83	IR	92	98	8
Ampicillin	74	IR	79	98	8
Cefazolin	81	IR	96	96	97
Cefovecin	79	IR	95	98	97
Cefpodoxime	77	IR	93	98	95
Cephalothin	81				
Ceftazidime		93	97	98	95
Cephalexin		IR	91	96	8
Chloramphenicol	87		92	94	92
Clindamycin	83				
Doxycycline	72	IR	93	IR	97
Enrofloxacin	77	30	96	100	97
Erythromycin	83				
Gentamicin	83	63	96	98	95
Marbofloxacin	79		96	100	97
Minocycline	79				
Nitrofurantoin	98				
Orbifloxacin			92	83	97
Penicillin	74				
Piperacillin/Tazobactam		87	98	100	
Pradofloxacin	83				97
Rifampin	100				
Tetracycline	72	IR	93	IR	97
Trimethoprim-sulfamethoxazole	74	IR	96	94	95
*Percentage positive for penicillin Binding Protein 2 (PBP2)	17				

*Isolates possessing an altered penicillin binding protein (PBP2) have acquired resistance to beta-lactam class antimicrobials. This is the same mechanism of resistance found in methicillin-resistant *S. aureus* (MRSA).

Note: Shaded boxes are not tested or reported for a particular drug due to lack of Clinical and Laboratory Standards Institute (CLSI)-approved breakpoints.