



Asante Laboratory Services

2024 Gram-Positive Antibigram

(Statistics are calculated from 2023 susceptibility data)

Gram Positive Organisms Percent Susceptible	Total # Isolates	Ampicillin	Penicillin	Penicillin (Oral) ¹	Penicillin (Parenteral) ¹	Penicillin (Meningitis) ¹	Oxacillin	Levofloxacin ⁵	Ceftriaxone	Ceftriaxone (Meningitis) ¹	Clindamycin	Erythromycin ³	Tetracycline ⁵	Vancomycin	Daptomycin	Gentamicin Synergy	Streptomycin Synergy	Trimeth/Sulfa	Rifampin ⁷	Nitrofurantoin ⁴	Linezolid
Enterococcus faecalis	1255	100						91					28	100	100	85	94			99	97
Enterococcus faecium	81	56						38					56	96	**	94	73			29	95
Enterococcus faecium VRE	53	0						0					43	0	**	97	35			11	94
Staphylococcus aureus (MSSA) ²	2068						100	83			83	66	91	100	100			94	100	99	100
Staphylococcus aureus (MRSA) ²	1012						0	18			82	14	86	100	100			92	99	100	100
Staphylococcus epidermidis ²	491						48	78			71	45	81	100	100			66	98	100	100
Staphylococcus haemolyticus ²	47						36	53			55	37	68	100	100			70	94	100	100
Staphylococcus lugdunensis ²	265						91	100			83	84	94	100	100			99	100	100	100
Streptococcus agalactiae (Group B)	77		100					100	100			53		100							
Streptococcus pyogenes (Group A)	61		100					97	100			61		100							
Streptococcus pneumoniae ¹	103		100	89	100	89		97	100	96		79		100							
Streptococcus anginosus	53		92					98	96			68		98							
Streptococcus intermedius	31		97					100	100			57		97							

Blank spaces indicate that an antibiotic is either inappropriate or has not been tested for that organism.

**This antimicrobial may be appropriate for use in the treatment of infections caused by this organism. Antibigram data is not available due to limitations in our routine test system.

FOOTNOTES:

1. Interpretations of Streptococcus pneumoniae susceptibility vary according to site of isolation (Penicillin and Ceftriaxone for CSF and non-CSF) and route of administration of some antimicrobials (Penicillin administered orally or parenterally). These interpretations are based on achievable blood and CSF levels for those antimicrobials.
2. Oxacillin resistance also implies resistance to cephalosporins, carbapenems, ticarcillin/clavulanic acid, ampicillin/sulbactam, and amoxicillin/clavulanic acid.
3. Azithromycin and Clarithromycin susceptibility may be deduced from Erythromycin results.
4. **Nitrofurantoin used for uncomplicated UTI and for patients with GFR >60 only.**
5. Levofloxacin and Tetracycline should only be used to treat Enterococci from uncomplicated UTIs
6. Rifampin should not be used alone for therapy.



Asante Laboratory Services

2024 Gram-Negative Antibigram
(Statistics are calculated from 2023 susceptibility data)

Gram Negative Organisms Percent Susceptible	Total # Isolates	Ampicillin ¹	Ampicillin/ Sulbactam ¹	Piperacillin/ Tazobactam ¹	Ertapenem	Meropenem	Aztreonam	Ciprofloxacin	Levofloxacin	Cefazolin (Urine) ⁵	Ceftazidime ¹	Ceftriaxone ¹	Cefepime	Cefepime SDD	Gentamicin	Trimeth/Sulfa	Nitrofurantoin ³
<i>Citrobacter braakii</i>	51			90	100	100	86	94			86	84	100		96	86	94
<i>Citrobacter freundii</i> ²	124			93	100	100	92	97			92	91	100		96	92	93
<i>Citrobacter freundii</i> complex MDR ²	38			36	97	100	16	89			13	3	85	13	97	92	87
<i>Citrobacter koseri</i> ²	88			100	100	100	99	100			98	98	99		99	99	85
<i>Klebsiella aerogenes</i> ²	185			95	99	100	95	100			94	95	100		100	99	12
<i>Klebsiella aerogenes</i> MDR ²	20			10	95	100	30	100			10	5	100		100	100	15
<i>Enterobacter cloacae</i> complex ²	367			97	99	100	97	99			98	97	99		99	94	39
<i>Enterobacter cloacae</i> complex MDR ²	53			16	77	100	8	92			10	2	84	29	98	77	45
<i>Escherichia coli</i>	710	72	78	99	100	100	100	93		98	100	99	100		97	87	98
<i>Escherichia coli</i> MDR	286	0	42	96	99	100	41	35		1	66	0	73	35	78	45	93
<i>Klebsiella oxytoca</i>	324	0	72	96	100	100	99	100		4	100	98	100		100	95	88
<i>Klebsiella oxytoca</i> MDR	18	0	0	67	100	100	33	94		0	83	0	94	61	39	39	67
<i>Klebsiella pneumoniae</i>	1138	0	94	99	100	100	100	99		99	100	100	100		99	98	37
<i>Klebsiella pneumoniae</i> MDR	66	0	12	82	97	98	28	62		2	35	5	68	63	55	14	22
<i>Klebsiella species</i>	58	0	81	97	100	100	97	100		83	97	97	98		97	95	67
<i>Klebsiella variicola</i>	32	0	81	100	100	100	100	100		75	100	100	100		100	97	73
<i>Morganella morganii</i> ²	104	0	1	100	100	100	98	98			99	100	100		93	89	0
<i>Proteus mirabilis</i>	606	91	95	100	99	100	100	90		98	100	100	100		97	89	
<i>Proteus mirabilis</i> MDR	15	7	33	100	93	93	87	40		13	73	7	47	33	73	27	
<i>Proteus vulgaris</i>	40	5	63	100	100	100	100	100		0	100	93	100		100	90	
<i>Providencia rettgeri</i>	48	0	81	98	98	100	100	100			100	100	98		96	100	
<i>Pseudomonas aeruginosa</i>	722			96		98	**	95			97		97		97		
<i>Pseudomonas aeruginosa</i> MDR	18			28		11	**	61			50		50		94		
<i>Serratia marcescens</i>	116			100	98	100	99	98			99	98	99		99	99	
<i>Stenotrophomonas maltophilia</i>	114								94		37					98	

Additional antimicrobial data available. Blank spaces indicate that an antibiotic is either inappropriate or has not been tested for that organism.

**This antimicrobial may be appropriate for use in the treatment of infections caused by this organism. Antibigram data is not available due to limitations in our routine test system.

Disclaimer: Data provided for organism groups in red are under threshold (30) and may not be precise. These have been included for comparison to their counterpart non-MDR group.

FOOTNOTES:

- These antibiotics may be degraded by Inducible Beta Lactamases (IB).
- These organisms may produce Inducible Beta lactamases (IB).
- Nitrofurantoin used for uncomplicated UTI and for patients with GFR >60 only.
- Includes data from Asante Rogue Regional Medical Center, Asante Three Rivers Medical Center, and Asante Ashland Community Hospital.
- Urine Cefazolin results predict results for the oral agents cefaclor, cefdinir, cefpodoxime, cefuroxime axetil and cephalixin when used for therapy of uncomplicated UTIs due to *E. coli*, *K. pneumonia* and *P. mirabilis*.
- MIC susceptibility data is not available for non-urine *E. coli*, *Klebsiella*, and *Proteus* spp. vs Cefazolin. Individual isolates may be tested using a disc diffusion method on request.