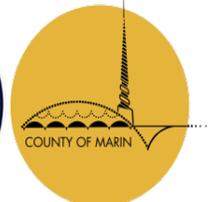
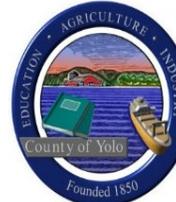


**NAPA-SOLANO-YOLO-MARIN COUNTY
PUBLIC HEALTH LABORATORY**
2201 COURAGE DRIVE, MS 9-200
FAIRFIELD, CA 94533
(707) 784-4410 FAX (707) 423-1979



Test	CRO (Carbapenem-resistant Organism: CRE, CRPA, CRAB) confirmation/screening
Test Description	CRO confirmation involves the use of the Cepheid Xpert CARBA-R PCR assay to detect the presence of the KPC, NDM, OXA-48, IMP-1, and VIM carbapenemase-producing bacterial genes in clinical isolates. CRO screening also involves the use of the Cepheid Xpert CARBA-R PCR assay to detect the five main carbapenemase-producing bacterial genes and is performed on rectal swabs only. Sample submissions must either be members of the <i>Enterobacteriales</i> order of bacteria (e.g., <i>Escherichia coli</i> , <i>Klebsiella</i> species, <i>Enterobacter</i> species), <i>Pseudomonas aeruginosa</i> , or <i>Acinetobacter baumannii</i> and show intermediate resistance to one or more carbapenems, or extensive resistance to beta-lactams. Organisms that test negative for the most common carbapenemase genes will be reflexed for phenotypic carbapenemase detection by the modified carbapenem inactivation method (mCIM). If a submitted <i>Acinetobacter baumannii</i> tests negative for the most common carbapenemase genes, the isolate will be sent to the Microbial Diseases Laboratory of the CDPH for further testing.
Acceptable specimens	A viable, pure isolate on a slant culture. A rectal swab in transport media such as Liquid Stuart.
Special instructions	A pure, low passage CRO isolate is preferred because some carbapenem resistance mechanisms can be lost with multiple subcultures. Also, an antibiotic susceptibility report should accompany the isolate and show intermediate resistance to one or more carbapenems, or extensive resistance to beta-lactams. A rectal swab should be placed in transport media to preserve the specimens. Highly soiled swabs are unacceptable as they can cause inconclusive results.
Specimen storage	An isolate can be stored on a slant culture at room temperature for up to 24 hours and refrigerated thereafter. A rectal swab in a transport tube can be stored at 15-28°C for up to 5 days.
Specimen shipping	Specimens should be shipped on ice.
CPT code	87081
Test fee	Refer to the posted fee schedule
Result availability (turnaround time)	Results from the CARBA-R PCR assay are typically faxed to the submitter within 1–2 business days after specimen receipt. Specimens that test negative by the CARBA-R PCR assay will be reflexed for additional testing and may be referred to the Microbial Diseases Laboratory to determine carbapenemase activity. If a specimen is referred, a final result will be faxed within approximately 2 weeks after referral.