

## MOLECULAR DIAGNOSTIC SERVICES

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### Viral Diagnostic Testing

Rodent colonies can be monitored for viruses that have an adverse effect on animal health and confound research applications. PCR is an important detection tool for some strains of parvovirus, coronavirus, and other agents that can persist in immunocompetent hosts beyond the acute infection stage. PCR is also helpful in detecting viruses in immunocompromised rodents, which can not be evaluated by serologic methods. Agents listed as part of our PCR Viral Detection Panels can be tested for on an individual basis.

### Bacterial Diagnostic Testing

Molecular methods are important for the detection of bacterial contamination in a rodent colony or facility. PCR has been accepted as the primary method of detection of such pathogens as *Helicobacter*. In response to the heightened awareness of this agent and the difficulties involved in its isolation by traditional culture techniques, Charles River offers *Helicobacter* PCR. The *Helicobacter* PCR panel is composed of multiple assays, which include a genus-specific assay (detects all known *Helicobacter* species) and separate species-specific PCR assays for the detection of *H. hepaticus* and *H. bilis*.

Testing is available for additional pathogens such as:

- *Mycoplasma pulmonis*
- *Pneumocystis carinii*
- *Corynebacterium bovis*
- Cilia-associated respiratory bacillus (CAR bacillus)

### Environmental Monitoring

In addition to screening your animals, you may choose to protect your research further by instituting an environmental monitoring program. PCR technology is used to detect pathogens on filters or equipment and other surfaces swabbed from your barrier rooms, isolators, and other facility locations.

### Controls and Facilities

Our facilities, equipment, and procedures are designed to prevent cross-contamination while enabling high sample throughput. Extensive system and sample controls, including sample evaluation for all PCR inhibitors, are performed with each customer submission. Prior to reporting findings, test articles that exhibit positive results are automatically subjected to confirmatory re-testing free of charge. In addition to the standard controls used for diagnostic testing, a sample spike control is used to evaluate recovery of nucleic acid during the isolation process.

Charles River Laboratories provides molecular-based infectious disease testing to detect selected rodent viruses, bacteria, and other agents. Advanced fluorogenic PCR methodology is employed to provide the highest level of sensitivity and specificity available. Our assays are meticulously designed and continuously refined to provide the most accurate and comprehensive molecular-based testing available in the marketplace today.



The sensitivity and specificity of our state-of-the-art molecular methods, combined with rapid results turnaround and Charles River Laboratories' industry-leading service, all add up to make our Molecular Diagnostic Testing an important component of your comprehensive health monitoring program.

### PCR Viral Detection Panels

Precautionary screening of biological materials prior to use for *in vivo* experimentation is an important biosecurity measure. As an alternative to the mouse antibody production test, PCR is quickly becoming a preferred method of choice for the evaluation of cell cultures, supernatant, ascitic fluid, and purified antibodies for the presence of extraneous bacteria and viruses. Charles River is pleased to offer result turnaround in five business days or less.

For a complete list of available assays, please consult our catalog, visit our web site at [www.criver.com](http://www.criver.com), or call our Technical Assistance Department at 1-800-338-9680.

Agent	Panels		
	Essential	Comprehensive	Rat
Mouse Parvovirus (MPV, MVM)*	•	•	
Mouse Hepatitis Virus (MHV)	•	•	
Reovirus (Type 1 & Type 3)	•	•	•
Lymphocytic Choriomeningitis Virus (LCMV)	•	•	•
Lactate Dehydrogenase-Elevating Virus (LDV)	•	•	•
Mouse Rotavirus (EDIM)	•	•	
Theiler's Murine Encephalomyelitis Virus (TMEV, GD-7)	•	•	•
Mousepox (Ectromelia)	•	•	
Hantavirus Hantaan	•	•	
Hantavirus Seoul	•	•	•
Polyoma Virus		•	
K Virus		•	
Mouse Adenovirus (MAV)		•	•
Mouse Cytomegalovirus (MCMV)		•	
Pneumonia Virus of Mice (PVM)		•	•
Mouse Thymic Virus (MTV, MTLV)		•	
Sendai		•	•
Rat Parvoviruses (RPV, KRV, RV, H-1)*			•
Rat Coronavirus (RCV, SDAV)			•
<i>Mycoplasma</i> genus (including <i>Acholeplasma</i> )		•	•

\*Strain determination assays performed on all positive parvovirus results.

  
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