

Mouse PCR Rodent Infectious Agent (PRIA) Panels

To keep your vivarium biosecure and protect the integrity of your research, incoming animals should be quarantined prior to entry into your facility and rack animals should be screened regularly. Since some agents are not efficiently transmitted via dirty bedding sentinels, it is ideal to directly screen study animals and eliminate dependency on bedding transmission. The Charles River PCR Rodent Infectious Agent (PRIA) panels enable you to save time and money by directly sampling rack animals to determine if they are actively shedding infectious agents.

Mouse PRIA Panels

All PRIA Panels are performed using TaqMan® technology on the OpenArray® platform. This sensitive and specific testing method allows us to detect an agent even when it is present in low, single-digit copy numbers, enabling us to detect minute levels of infectious agent. All PRIA panels include our signature controls to monitor nucleic acid isolation, reverse transcriptase and PCR inhibition, so you can be confident that we are providing accurate results. To learn more about Infectious Disease PCR testing, the OpenArray® platform, or available rat PRIA Panels, please visit www.criver.com or askcharlesriver@crl.com.

Agent		Ante-mortem* Sample Type	Mouse Enteric PRIA	Mouse Prevalent PRIA	Mouse Surveillance PRIA	Mouse FELASA** PRIA	Mouse Surveillance Plus PRIA	
Parasites	Fur mites*** (<i>Myobia</i> , <i>Myocoptes</i> , <i>Radfordia</i>)	Fur swab		■	■	■	■	
	Pinworm*** (<i>Aspicularis</i> and <i>Syphacia</i>)	Feces	■	■	■	■	■	
	<i>Cryptosporidium</i>				■	■	■	
	<i>Giardia</i> (<i>G. lamblia</i> and <i>G. muris</i>)				■	■	■	
	<i>Spironucleus muris</i>				■	■	■	
Viruses	Mouse hepatitis virus (MHV)	Feces	■	■	■	■	■	
	Mouse parvoviruses*** (MPV-1, MPV-2, MPV-3, MPV-4) MVM)		■	■	■	■	■	
	Mouse rotavirus (MRV/EDIM)		■	■	■	■	■	
	Murine norovirus (MNV)		■	■	■	■	■	
	Theiler's murine encephalomyelitis virus (TMEV [GDVII])		■	■	■	■	■	
	Mouse adenovirus (MAV-1 & MAV-2)					■	■	
Bacteria/ Fungi	Cilia-associated respiratory bacillus (CAR Bacillus)	Oral swab/ lung****			■		■	
	<i>Pneumocystis spp.</i>	Skin swab			■		■	
	<i>Corynebacterium bovis</i>				■		■	
	<i>Helicobacter</i> *** (Genus, <i>H. hepaticus</i> , <i>H. bilis</i>)		■	■	■	■	■	
	<i>Pasteurella pneumotropica</i> (Jawetz and Heyl biotypes)		■	■	■	■	■	
	<i>Citrobacter rodentium</i>				■	■	■	
	<i>Corynebacterium kutscheri</i>				■	■	■	
	<i>Mycoplasma pulmonis</i>				■	■	■	
	<i>Salmonella spp.</i>				■	■	■	
	<i>Streptobacillus moniliformis</i>				■	■	■	
	<i>Streptococcus</i> (Beta-hemolytic; Group B)				■	■	■	
	<i>Staphylococcus aureus</i>				■	■	■	
	<i>Clostridium piliforme</i>		Feces				■	■
	<i>Streptococcus</i> (Beta-hemolytic; Group C)						■	■
	<i>Streptococcus</i> (Beta-hemolytic; Group G)						■	■
	<i>Streptococcus pneumoniae</i>						■	■
	<i>Bordetella bronchiseptica</i>							■
	<i>Campylobacter spp.</i>							■
	<i>Klebsiella oxytoca</i>							■
	<i>Klebsiella pneumoniae</i>							■
<i>Pseudomonas aeruginosa</i>						■		
<i>Staphylococcus xylosum</i>						■		
Controls	Positive template		■	■	■	■	■	
	Negative template		■	■	■	■	■	
	Spike inhibition		■	■	■	■	■	
	Nucleic acid recovery control (NARC)		■	■	■	■	■	
2011 Price			\$240.00	\$247.00	\$338.00	\$345.00	\$415.00	

*For post-mortem sample collection, contact Charles River for alternative sample types.

**Panel is compatible with FELASA recommendations. Other tests (e.g., serology assays) can be added to provide a comprehensive screen.

*** Strain determination assays are performed on all positive results.

****Post-mortem sample required.

technical sheet

Suggested Uses of PRIA

Health concerns vary greatly with facility size and research type. PRIA panels have many potential applications to augment your health surveillance programs:

- Alternative to shipping live animals for diagnostic testing in the midst of extreme temperatures
- Expedite quarantine by learning the health status of incoming animals within two weeks of arrival (see “Quarantine Testing”)
- Minimize animal use by augmenting sentinel-based health surveillance programs (see “Routine Health Monitoring”)
- Verify that study animals are free from infection at a specific time point
- Confirm the health of rederived pups by screening the embryo-transfer (ET) recipient female post-weaning
- Assess biosecurity risk by testing live-trapped rodents or feces found in bait stations

Please contact us at askcharlesriver@crl.com to discuss how PRIA panels can be incorporated into your specific program.

Quarantine Testing:

The PRIA panels can be used to augment your rodent quarantine testing program by directly screening principal animals, allowing you to determine if prevalent viruses and bacteria are actively being shed. The PRIA panels allow you to reduce rodent quarantine time since the dependency on seroconversion is eliminated.

A few days after animals arrive, multiple samples can be collected from each animal and screened via the PRIA panel of your choice. It is best to only pool samples from within the same group during quarantine testing. It is also important for each rodent in a quarantine group to be represented in the testing process, as each animal can be in a different stage of infection.

Results from PRIA panels are meant to corroborate pre-existing health reports from the exporting institution. Similar to bedding sentinel quarantines, 9-12 months (three to four quarters) of health report data from the source facility should be reviewed and compared with the PRIA panel results to confirm agreement. PRIA testing should be used to verify the health status and detect other agents not listed on the health report history. Unexpected positive and negative results that may impact your biosecurity specifications should always be investigated and verified by confirmation testing. If a sample results in a positive finding, you can take the appropriate action to manage the contamination immediately and reduce the potential spread of infection.

Routine Health Monitoring:

The PRIA panels can also be used to supplement your routine rodent health surveillance program. Since most sample types are non-invasive, PRIA panels can screen rack or study animals easily, without using extra animals for sentinels.

In general, we do not recommend PRIA panels as a complete replacement for whole animal monitoring program, as there can be a “detection-gap” for infectious that quickly spread and clear. Consider using PRIA panels as an add-on to traditional live animal health monitoring to look for key agents (such as fur mites or pinworms) using gold standard methods as well as PCR.

PRIA Panels can also be used when weather restricts the shipment of live animals for diagnostic testing.

Sample Pooling

You can pool samples from up to 10 mice. Each pooled sample type must be kept separate from the others: fecal pellets, oral swab/nasal aspirate/lung wash, and skin/fur swab (see table for sample types). The PRIA process does not accommodate the pooling of multiple lung tissues, therefore only one lung specimen can be submitted along with the pooled sample set.

Each sample type group will be pooled in our laboratory. Our processes allow us to pool the genetic material extracted from multiple sample types (e.g., feces, oral swab and skin swab) and test together with one result reported.

Sample Specifications, Storage and Submission

All samples must be accompanied by a completed *PCR Rodent Infectious Agent (PRIA) Panels Sample Submission Form* (found online at www.criver.com/info/diagnostic_sample_submission); sampling recommendations, sample storage requirements and submission instructions can be found in this document.

To ensure that your samples arrive safely at our laboratory, we provide International Air Transport Association (IATA)-compliant shipping materials (sample submission vials/swabs, submission forms, shipping labels, containers, etc.) free of charge to all Charles River Research Animal Diagnostic Services customers. To request materials, simply complete our Diagnostic Services Shipping Materials Request Form (www.criver.com/info/quotes) prior to sample submission.