

Screening of Research Biologics for the Presence of Rodent Infectious Agents

Research biologics are risk factors for vivarium biosecurity. Furthermore, a contamination may compromise the integrity of your *in vivo* research. Charles River offers TaqMan® PCR testing on the OpenArray® platform so you can perform precautionary screening on your research biologics to confirm that they are free of rodent infectious agents.

Rodent Agent PCR Panels

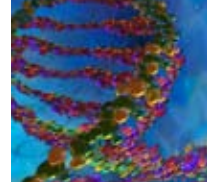
Agent	Mouse Essential Panel	Rat Essential Panel	Mouse/Rat Comprehensive Panel
Murine norovirus (MNV)	■		■
Mouse parvoviruses (MPV-1, MPV-2, MPV-3, MPV-4, MVM)	■		■
Mouse hepatitis virus (MHV)	■		■
Mouse rotavirus (MRV/EDIM)	■		■
Mousepox virus (Ectromelia) (ECTRO)	■		■
Polyoma virus (POLY)	■		■
Mouse adenovirus (MAV-1 & MAV-2)	■		■
Hantavirus hantaan (HANT)	■		■
Hantavirus seoul (SEO)		■	■
Reovirus (Type 1 & 3) (REO)	■	■	■
Lymphocytic choriomeningitis virus (LCMV)	■	■	■
Lactate dehydrogenase-elevating virus (LDV)	■	■	■
Theiler's murine encephalomyelitis virus (TMEV [GD-7])	■	■	■
Sendai virus (SEND)	■	■	■
<i>Mycoplasma</i> (genus) (including <i>Acholeplasma</i>)	■	■	■
<i>Mycoplasma pulmonis</i>	■	■	■
Rat cytomegalovirus (RCMV)		■	■
Rat theilovirus (Theiler's-like virus of rats) (RTV)		■	■
Rat parvoviruses (RPV, KRV, RMV, H-1)		■	■
Rat rotavirus (IDIR)		■	■
Rat coronavirus (RCV, SDAV)		■	■
K virus (K)			■
Mouse cytomegalovirus (MCMV)			■
Mouse thymic virus (MTLV)			■
Pneumonia virus of mice (PVM)			■
Spike inhibition control	■	■	■
Nucleic acid recovery control (NARC)	■	■	■
Positive template control	■	■	■
Negative template control	■	■	■

Custom panels and individual agent testing are available upon request; please inquire for pricing.

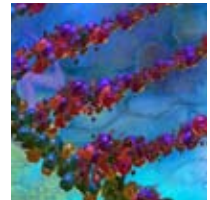


Understanding Research Biologics Testing

“Research biologics” is the general term used to describe materials such as cells, tissues, proteins or other material that is derived from a living system. Research biologics are often introduced into research animals as part of an investigative procedure and, for this reason, can contribute to inadvertent contamination of the research animals and facility cohorts if the material contains an infectious agent.



Any product of animal origin to be used in a facility or directly injected into animals (cells, tumor lines, viral stocks, mouse serum, etc.) should be tested for the presence of adventitious agents before being used. These biological materials can harbor both human and rodent infectious agents and are often of unknown origin. Even if they are introduced from an impeccably clean source, testing is still crucial as they may have become contaminated at the time of collection or through handling or processing (e.g., being purified on a column that previously held rodent serum).



Similar to your routine rodent health surveillance program, responsible testing should include assays for the agents that are likely to be present or may pose the greatest threat as a contaminant. An example testing program for cell lines should include a complete agent evaluation (Mouse/Rat Comprehensive Panel) for materials with no test history that have been obtained by your facility. Subsequent lots of cell passages or materials propagated from the cells may be tested only for agents that are prevalent in research biologics and in laboratory animal facilities and those that are zoonotic (Mouse or Rat Essential Panel).

Commonly Screened Research Biologics

- Cell lines – primary and continuous (including tumors and tumor cell lines)
- Cell line products, such as basement membrane matrix proteins
- Feeder cells, such as spleenocytes and thymocytes
- Ascites
- Purified antibodies or other proteins

Sample Preparation and Submission

When submitting research biologics for PCR testing, please provide two frozen, undiluted aliquots of at least 200µl each. If necessary, smaller, undiluted quantities may be acceptable; please contact Charles River prior to submission.

Although cell number is not critical when submitting a suspension, please note on the submission form if there are more than 5×10^7 cells/mL. For submission of only the pellet, a cell number estimation is required. All samples must be accompanied by a completed Infectious Disease PCR Sample Submission Form (found online at www.criver.com/info/diagnostic_sample_submission); submission instructions can be found in this document.

Samples should be shipped in vials on dry ice. To ensure that your samples arrive safely at our laboratory, we provide International Air Transport Association (IATA)-compliant shipping materials (sample submission vials, 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.

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