Serology Testing and Sample Submission

Sample Processing
When serum samples are sent to Charles River, they are screened using the Multiplexed Fluorometric ImmunoAssay® (MFIA®) platform. Following sample receipt and accessioning, technicians process samples under the supervision of the laboratory supervisor. All technicians are trained on and follow standard operating procedures (SOPs) for duties specific to their laboratory and their task.

To perform the MFIA® serology, bead panels, test sera and other assay reagents are added to wells in filter-bottom 96-well microtiter plates. As is the case for ELISA and IFA, the MFIA® is performed as a heterogeneous test, meaning that incubations (at 27 ± 2 °C on an orbital shaker set to between 400 and 700 RPM) are followed by filter-wash steps to remove unbound serum constituents or labeled reagent. Wash solution added to plate wells is removed by aspiration through well filter-bottoms, which retain the beads. Antigen-antibody complexes formed during the test serum incubation are detected by incubations with biotinylated goat or rabbit antibodies to immunoglobulin of the species being tested (BAG), followed by R-phycoerythrin-labeled streptavidin (SPE).

In-House Serology Testing
Our technical staff is available to assist clients in setting up their in-house ELISA or MFIA® serological testing laboratory. Beyond supplying reagents, we will train staff and provide continual support for troubleshooting and results interpretation. Further, as long as a client is using Charles River reagents, confirmation testing for any analysis completed at their facility resulting in inconclusive or unexpected results due to assay issues will be performed at Charles River free of charge.
A typical new training session lasts between two to three days, depending on the experience level of those being trained. Prior to training, we will provide a list of materials/equipment required for the serology testing laboratory. During training, trainees will have the opportunity to meet with various members of our serology and professional staff and learn the techniques and methodology involved in performing serology testing from start to finish. Prior to any training, we ask that clients provide a summary of their staff’s experience performing serology-based assays, their capabilities, and the main points they want addressed. These details will allow our staff to customize a training program to the facility’s needs.

Ordering Serology Reagents
The Charles River Customer Service International Team supports our global serology reagent customers. They can answer questions via telephone or email regarding reagent ordering and can assist with the international shipping/customs processes. The Customer Service Group works directly with the team fulfilling reagent orders; together, they discuss shipment specifications and ensure that our clients receive the materials they need within their specified timeline. Reagent order forms can be found online at www.criver.com/serologyreagents.

Products and Services
- Serology testing for rodents, rabbits and nonhuman primates
- MFIA® reagents for rodents, rabbits and nonhuman primates
- ELISA reagents for mice, rats, guinea pigs, hamsters and nonhuman primates
- IFA reagents for mice, rats, guinea pigs, hamsters, rabbits, gerbils and nonhuman primates