RecombiVirus Anti-Lymphocytic Choriomeningitis Virus Nucleoprotein (LCMV-NP) IgG ELISA Kits

RecombiVirus Lymphocytic Choriomeningitis Virus Nucleoprotein (LCMV-NP) IgG ELISA Kits are specifically designed to detect and measure anti-LCMV IgG antibodies in sera or plasma of animals. Samples are typically used at 1:100 or more in the ELISA test (115 min, at room temp). Isotype-specific ELISA kits measures only one isotype (IgG or IgM). RecombiVirus ELISAs use purified recombinant viral antigens for better specificity, sensitivity, and to avoid handling of live/inactivated virus. There is no virus or viral extract used in the kit. ELISA kits for mouse, rat, hamster and G. Pig samples are currently available but other species can be requested as special order. All ELISAs follow the similar design so this brief brochure represents general features of anti-LCMV-NP antibody ELISAs. Detailed manual is provided with the kit.

**RecombiVirus Anti-LCMV-NP antibodies IgG ELISA Kit Features**
- Highly purified recombinant (E. coli) murine LCMV-NP full length (~64 Kda) coated ELISA strip plates (96 tests; 8 wells x12); Stability ~8-12 months.
- Species specific (mouse, rat hamster or G. Pig) Anti-LCMV-NP IgG –ve and positive controls.
- Samples 100 ul (1:100 or more) 3 incubations at room temp (60+30+15 min) or 105 min assay.

**Specificity:** High levels of anti-LCMV-NP IgG have been observed in experimental or natural infection with LCMV in animals. These ELISAs do not detect LCMV-IgM or IgA antibodies. Murine LCMV-NP is LCMV-NP protein has significant protein sequence homology with related arenaviruses NPs: Dadenong virus (94%), walk virus, morogoro virus, Mopeia virus, lppy virus, Lassa virus, mobala, and pitrial virus (68-78%).

**All ELISA kits follow the same basic design, General assay procedure etc.**
- Step 1. Pipet 100 ul each of pre-diluted negative and positive control, and samples (diluted 1:100 or higher).
- Step 2. Mix gently for 5-10 seconds and incubate for 60 min at room temp.
- Step 3. Wash 3X using supplied wash buffer. Add 100 ul of Antibody-HRP Conjugate to all wells, mix by gentle mixing for 5-10 seconds and incubate at room temperature for 30 min.
- Step 4. Wash 4X using supplied wash buffer. Add 100 ul of HRP Substrate solution to all wells, mix gently, and incubate at room temperature for 15 min. Blue color develops in standards and positive samples.
- Step 5. Pipet 100 ul of stop solution into all tubes, mix gently (blue color turns yellow). Measure OD at A450 nm. Positive samples can be observed visually and the antibody conc calculated from the standard curve.

**General Information**

Animals, just like humans, are susceptible to various bacterial and viral infections. Animals are used widely in biomedical research. Laboratory animal infections may compromise the health of the animals and ultimately the research data derived from them. Animals or animal-derived products (purified protein or cell lines) are transported from one part of the world to another in a matter of days. So there is great potential for the diseases to spread very quickly. Many infections are asymptomatic and without any overt clinical symptoms. Detection of microbial infections has relied largely on serological screening and presence of microbial antigens or antibodies. Diagnosis is usually based on serology, via ELISA or IFA or both. ELISA, when available, is the method of choice as IFA (immunofluorescence assay) HAI (hemaglutinim immunooassay) are not only cumbersome, less sensitive, more expensive but not suitable for large number of samples. The viral antigens for the first generation of ELISA were developed using crude viral extracts prepared from virus produced in a variety of animal and human cell lines. With the advancement of recombinant DNA technology and our knowledge about the viral antigenic proteins, significant improvements have been made using recombinant viral proteins as antigens to detect virus specific antibodies. Specific viral recombinant proteins (envelop proteins, nucleoprotein or membrane proteins) have been shown to be antigenic and react with antibodies produced by the whole virus or during natural infections. There is more consistency in the production and usage of Recombinant protein-based ELISA kits than the crude viral antigens. There is also no danger of contamination of the animal colony or the personnel when using recombinant proteins. The situation is very similar to human clinical diagnostic assays for hepatitis or HIV. Now all of the tests are done using purified recombinant proteins. ADI is the first company to commercially develop 2nd generation RecombiVirus ™ ELISA kits for the detection of antibodies to various animal viruses.

**Lymphocytic choriomeningitis (LCM)** is a rodent-borne viral infectious disease that presents as aseptic meningitis, encephalitis or meningencephalitis. Its causative agent is the Lymphocytic Choriomeningitis Virus (LCMV), a member of the family Arenaviridae. LCMV is an enveloped RNA virus. The L strand is ambisense RNA and encodes the polymerase and z protein while the S strand is ambisense and encodes the nucleo-protein and glycoproteins. **LCMV-Nucleoprotein (LCMV-NP)** encapsidates the genome, protecting it from nucleases. LCMV is naturally spread by the common house mouse. Once infected, these mice can become chronically infected by maintaining virus in their blood and/or persistently shedding virus in their urine. LCMV infection results in acute immune-mediated disease after one week and lesions are seen are characteristics of LCMV (lymphocytic infiltrate in liver, adrenal, kidney, and lung and immune-complex glomerulonephritis and vasculitis). Diagnosis is best accomplished through serology (IFA, MIFA or ELISA). Antibodies to LCMV-NP have been used for the diagnosis of LCMV in animals. Testing of animal colonies for LCM antibodies should be part of regular health monitoring. Human LCM infection manifests itself in a wide range of clinical symptoms, and may even be asymptomatic for immunocompetent individuals.

**Anti-LCMV IgG Related ELISA kits and other reagents.**
(See Details at the website) [http://4adi.com/commerce/catalog/spcategory.jsp?category_id=2757](http://4adi.com/commerce/catalog/spcategory.jsp?category_id=2757)

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