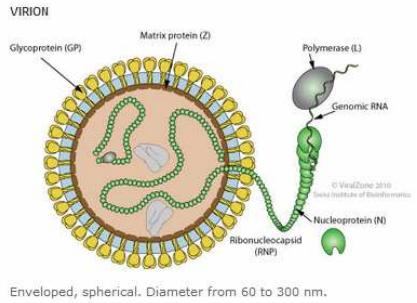
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) Antibodies and Controls

□ **Cat #** LCMV14-S	**Rabbit** Anti-Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) antiserum	**SIZE**: 100 ul
□ **Cat #** LCMV14-C	Recombinant. LCMV Nucleoprotein (NP) WB +ve control	**SIZE**: 100 ul

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. Microbial infections alter not only the animal behavior but also the biological responses. Apart from the use of whole animals for experimentations, numerous animal cell lines and proteins are also derived from animals and used in biomedical research. Animals or animal-derived products 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.



Enveloped, spherical. Diameter from 60 to 300 nm.

Lymphocytic choriomeningitis (LCM), is a rodent-borne viral infectious disease that presents as aseptic meningitis, encephalitis or meningoencephalitis. Its causative agent is the Lymphocytic Choriomeningitis Virus (LCMV), a member of the family Arenaviridae. LCMV is an enveloped virus with a helical nucleocapsid containing an RNA genome consisting of two single-stranded RNA segments. 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-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. Other modes of mouse-to-mouse transmission include nasal secretions, milk from infected dams, bites, and during social grooming within mouse communities. Airborne transmission also occurs. Most rodents are susceptible to LCMV infection, with hamsters especially sensitive. Rats are naturally resistant. LCMV is zoonotic. 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 best accomplished through serology (IFA, MFIA or ELISA). Testing of animal colonies for LCMV antibodies should be part of regular health monitoring. Antibodies to LCMV-NP have been used for the diagnosis of LCMV in animals.

Source of Antigen and Antibodies

Antigen	Recombinant purified LCMV-NP protein
Ab Host/type	Rabbit, Polyclonal antiserum (Cat # LCMV14-S) supplied in 0.05% azide as preservative.
2-Ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

LCMV-NP was expressed in E. Coli as his-tag fusion protein (full length, purity >95%, ~63.5 KDa). Purified LCMV-NP protein for Western blot +ve control (**Cat #** LCMV14-C) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of # LCMV14-**C** for good visibility with antibody Cat # LCMV14-S. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the # LCMV14-**C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Antiserum

□ 100 ul □ solution □ lyophilized powder

Buffer: PBS+0.05% azide

Reconstitute powder 100 ul of PBS.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting: An initial dilution of 1:500-2K is recommended for Western. Users must optimize antibody dilution depending upon the nature of samples and other technical conditions.

ELISA (1:10-50K; using 50-100 ng antigen/well).

Histochemistry & Immunofluorescence: not tested.

Specificity & Cross-reactivity

LCMV-NP protein has significant protein sequence homology with related arenaviruses NPs: Dadenong virus (94%), walk virus, morogoro virus, Mopeia virus, Ippy virus, Lassa virus, mobala, and piritial virus (68-78%). Recombinant purified LCMV-NP protein is available for control studies.

References: Takimoto, K (2008) Exp. Animal 57, 357-365; Childs JE (1992) *Am. J. Trop. Med. Hyg.* **47,** 27–34; Hamberger FR (1995) Labn. Animl. Sci. 45, 493-496; Dykewicz CA, (1992) JAMA 267, 1349–53; Baker DG (2003) In Natural Pathogens of Lab. Animals, pp 385.

*This product is for In vitro research use only.

Related material available from ADI

LCMV14-C	Recombinant (E. coli,~63.5 Kda) Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) control for Western blot
LCMV14-S	Rabbit Anti-Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) antiserum
LCMV15-M	Mouse monoclonal Anti-Lymphocytic choriomeningitis virus (LCMV) Capsid Protein 1 (VP1) antibody, culture medium
LCMV15-R-10	Recombinant (E. coli, ~63.5 Kda) Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP), full length
LCMV11-MNC	Mouse Anti-Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) antibody negative control serum
LCMV11-MPC	Mouse Anti-Lymphocytic choriomeningitis virus (LCMV) Nucleoprotein (NP) antibody positive control serum

LCMV14-S 140924P

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